

Fig. 1A

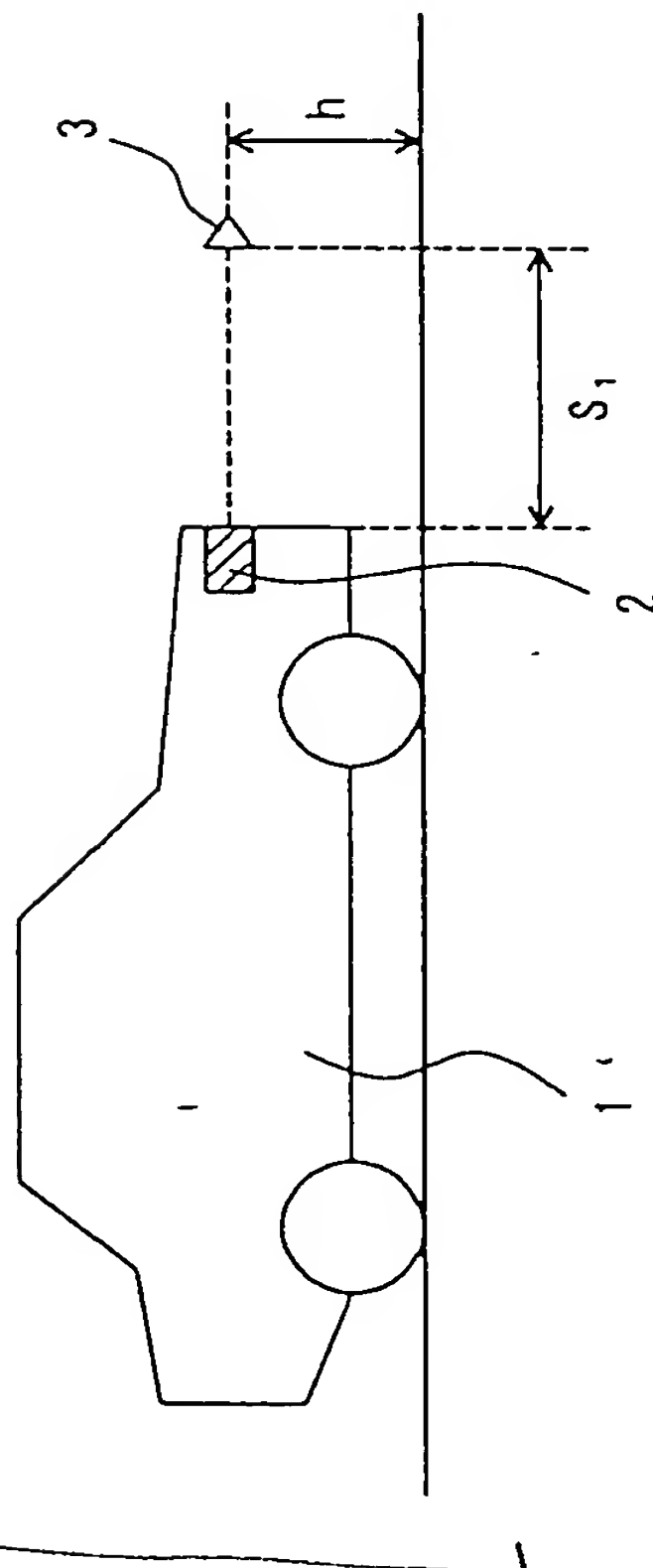


Fig. 1B

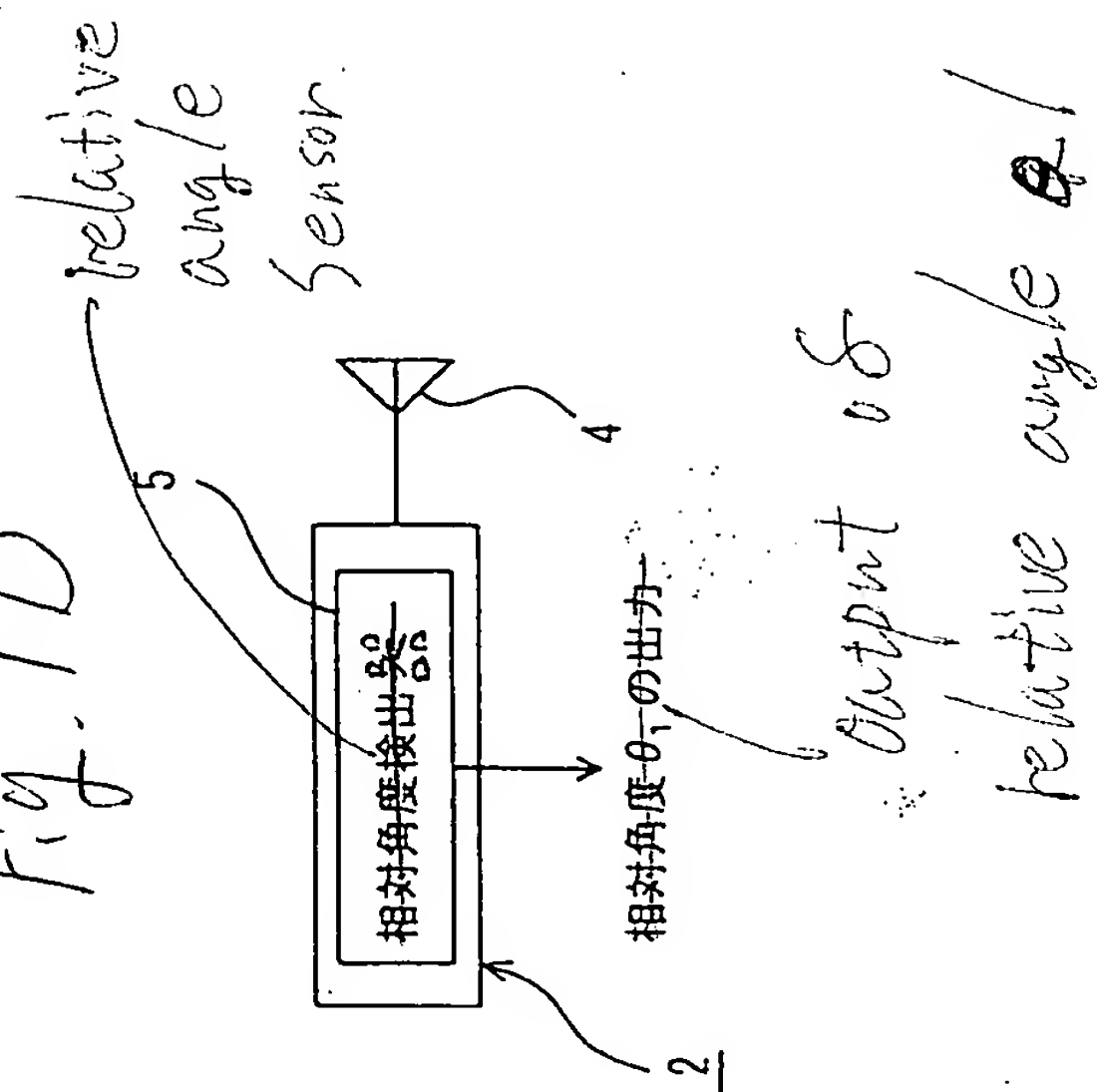


Fig. 2A

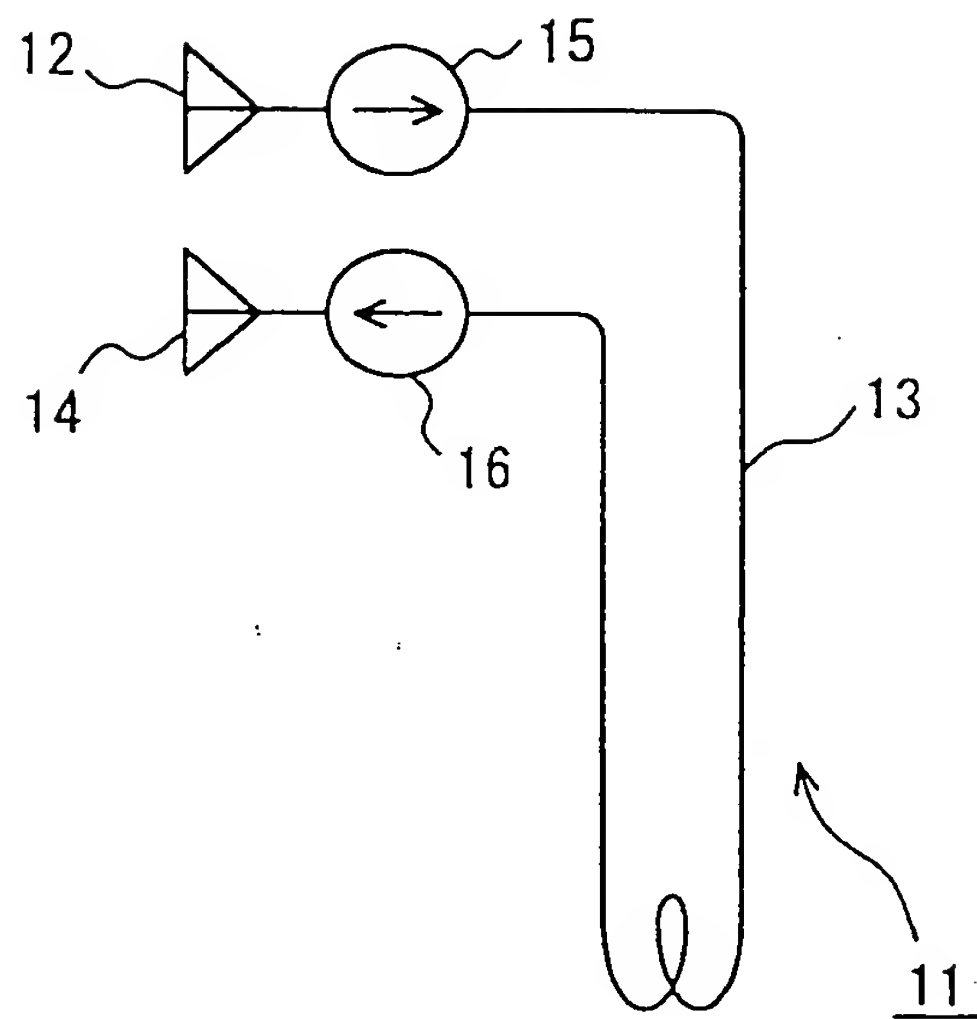


Fig. 2B

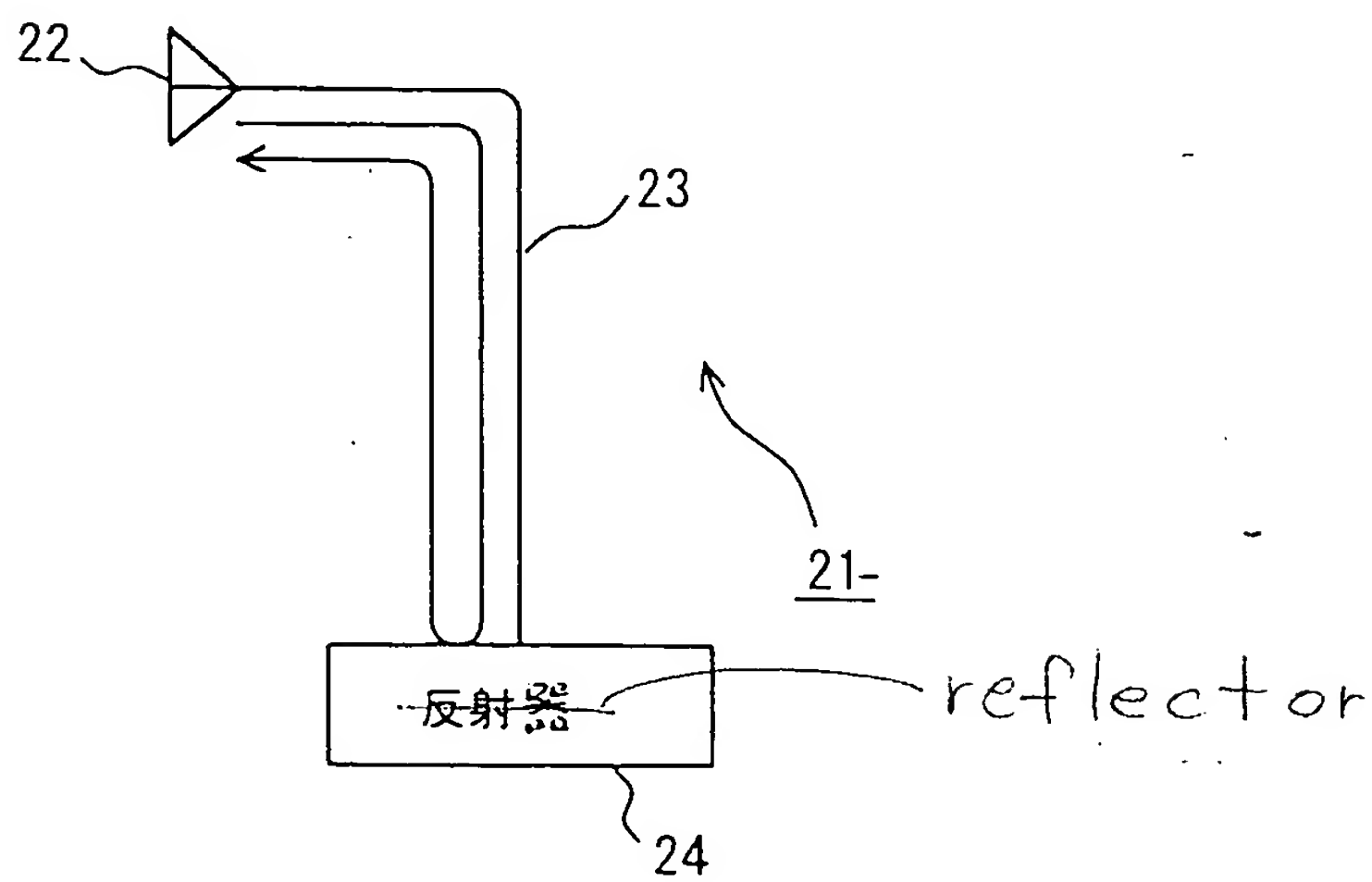


Fig. 3A

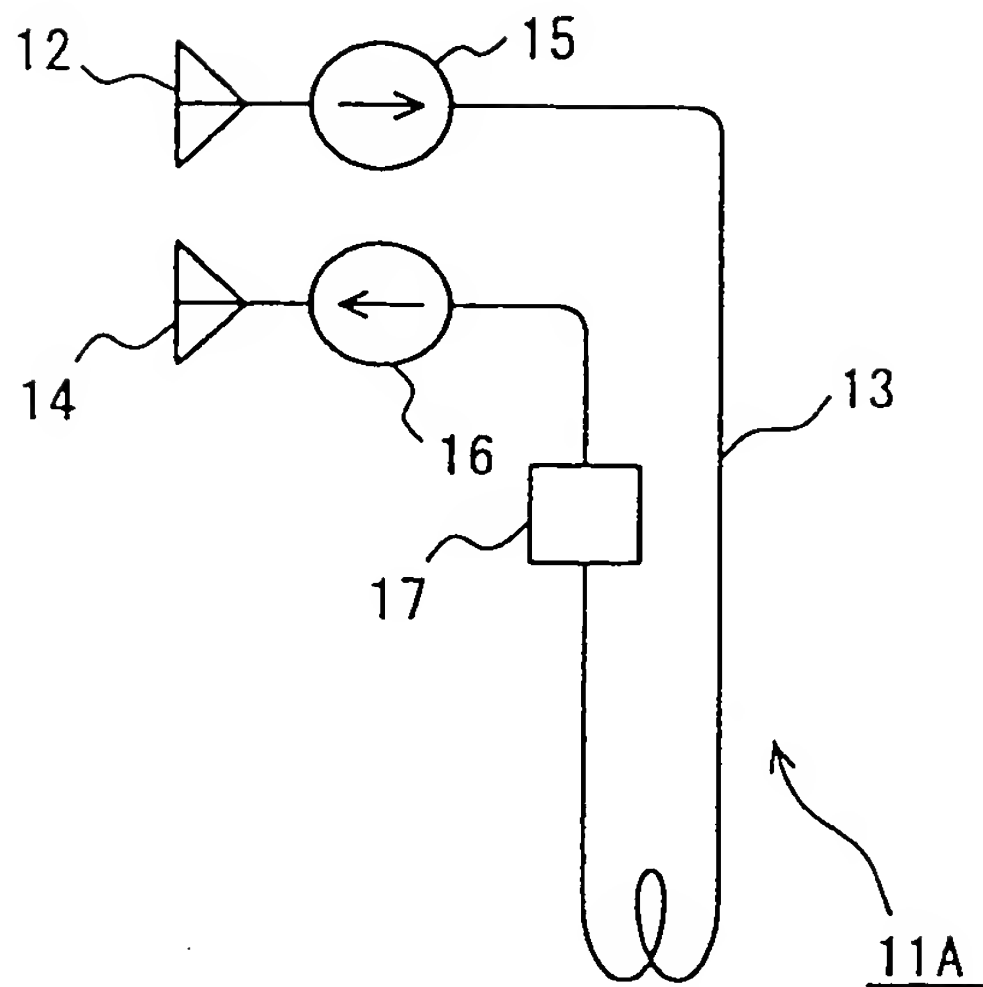


Fig. 3B

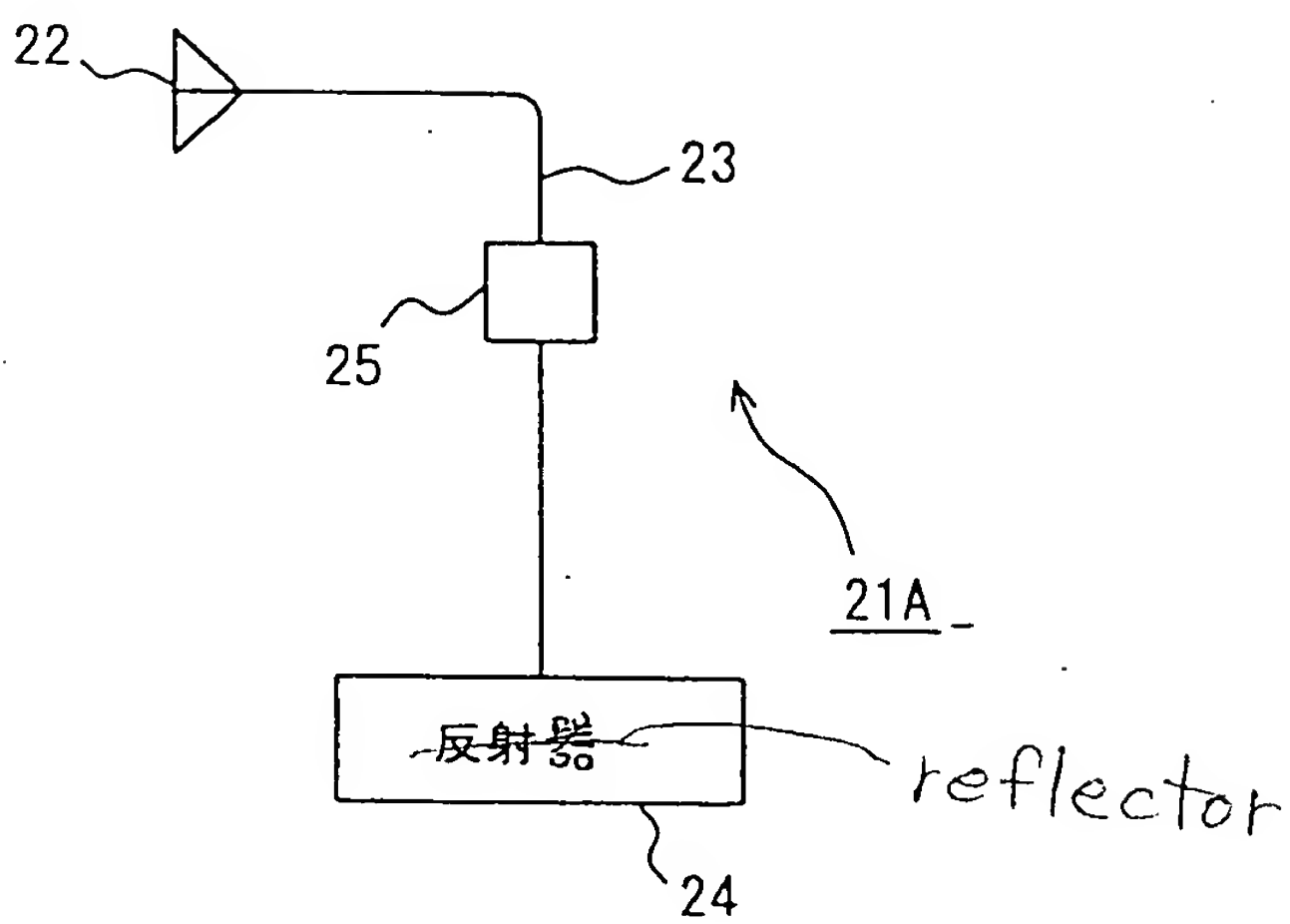
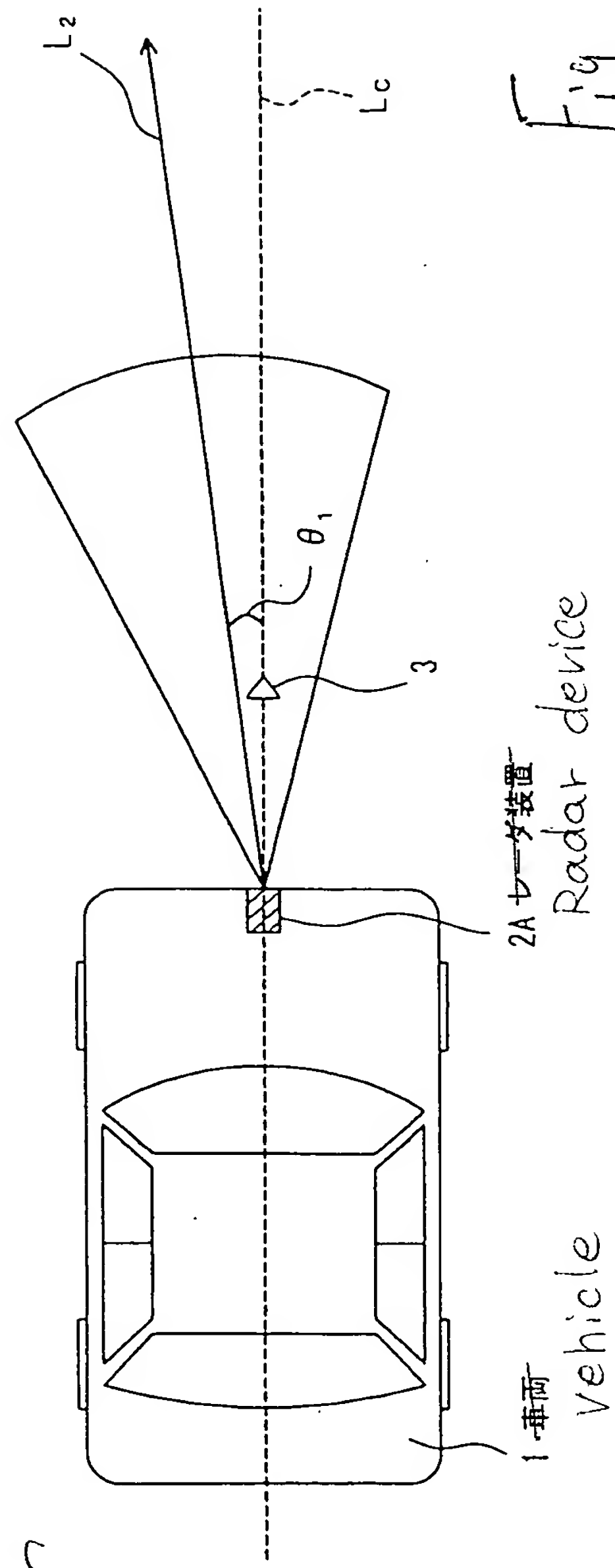


FIG. 4A

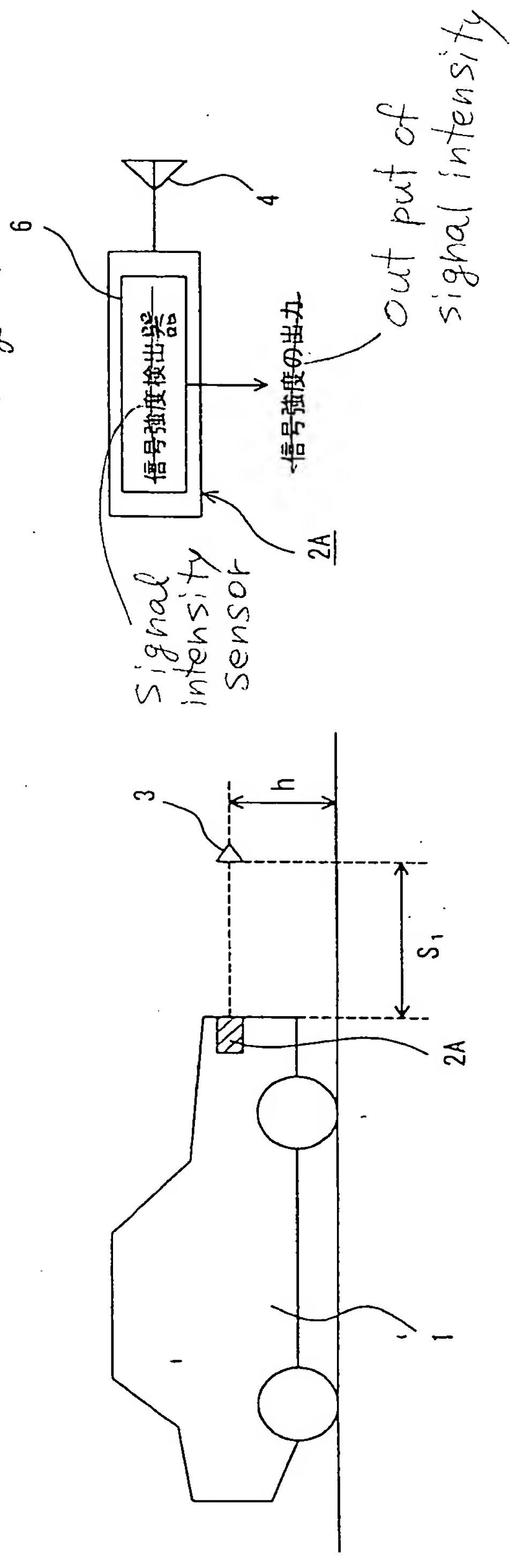
Fig. 4A



2A レーダ装置
Radar device

1 車両
vehicle

Fig. 4B



Signal
intensity
sensor

信号強度検出器

信号強度の出力

out put of
signal intensity

2A レーダ装置

Radar device

1 車両

vehicle

6

3

h

S_1

2A

4

Fig. 5

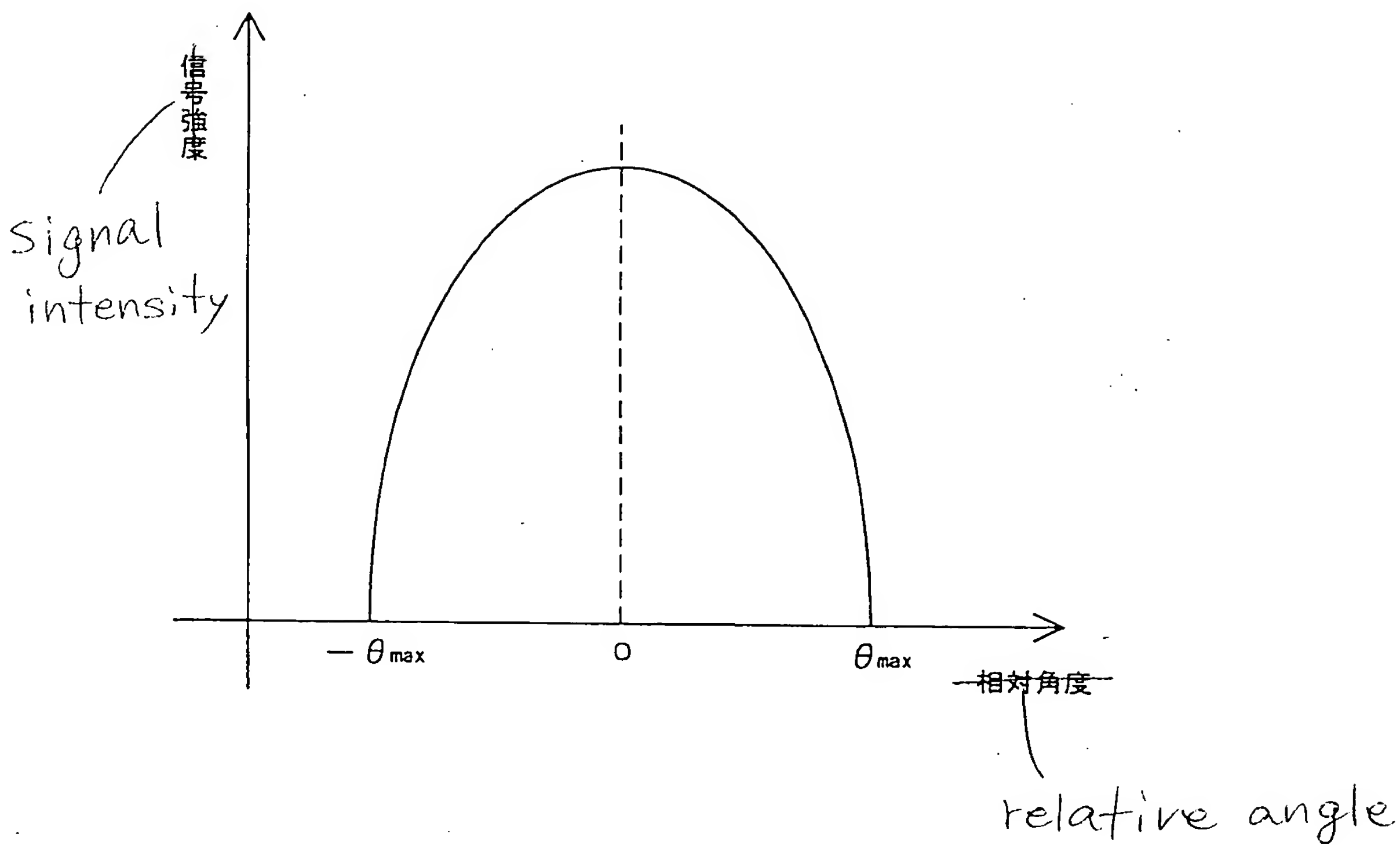


FIG. 6A

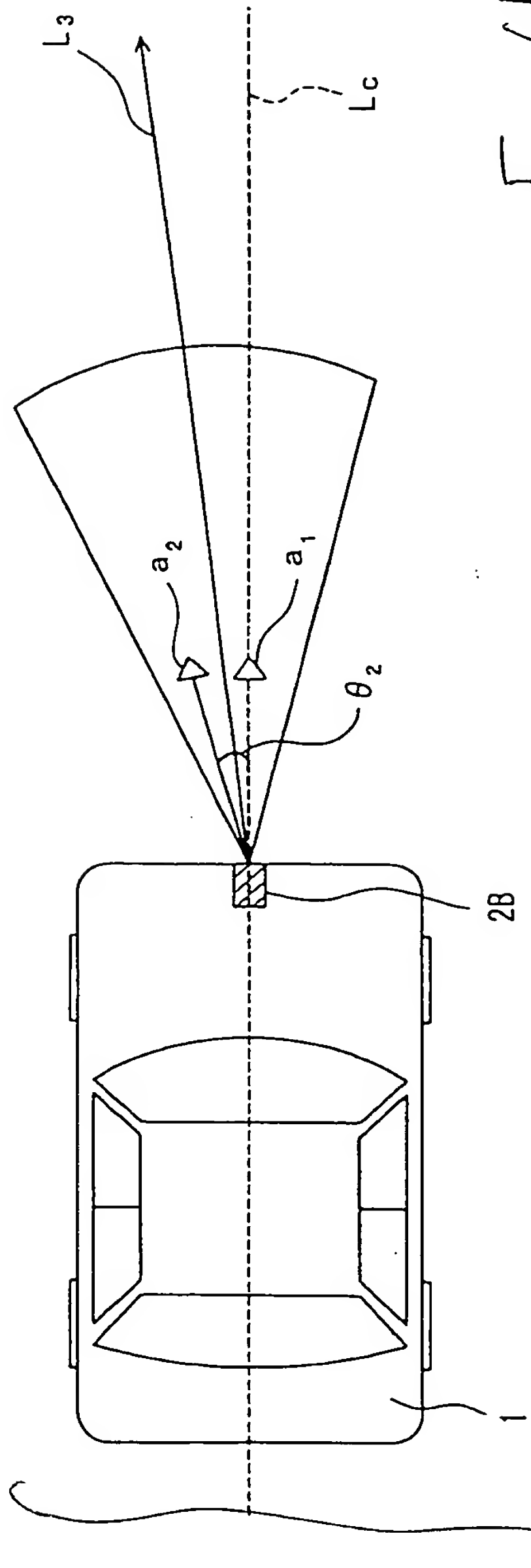
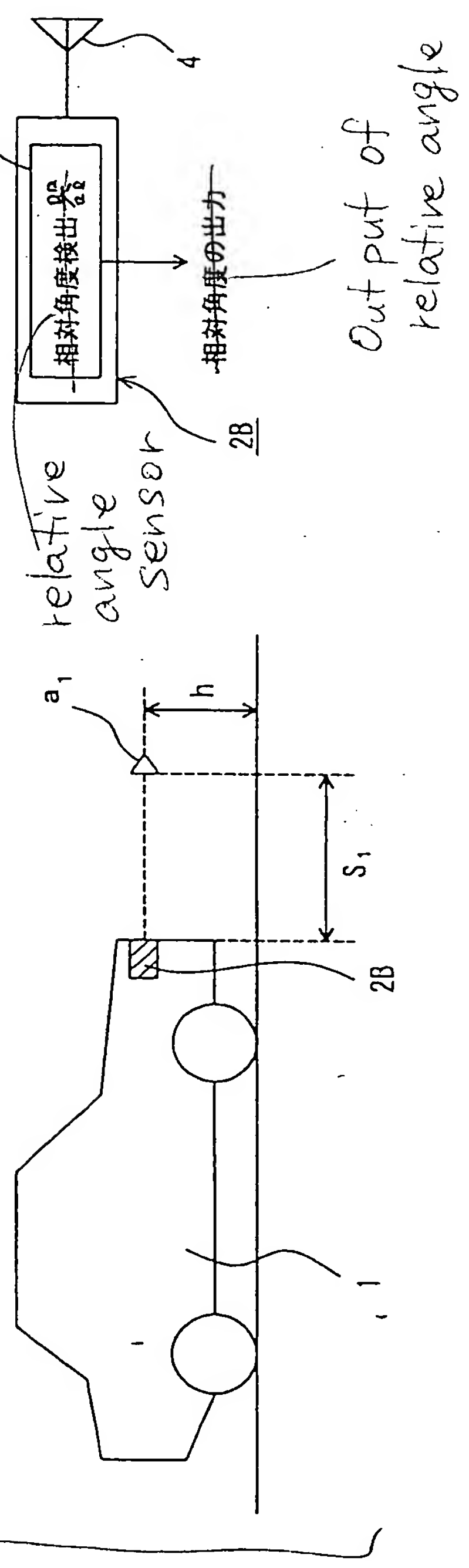


Fig. 6A

Fig. 6B



Output of relative angle

Fig. 7

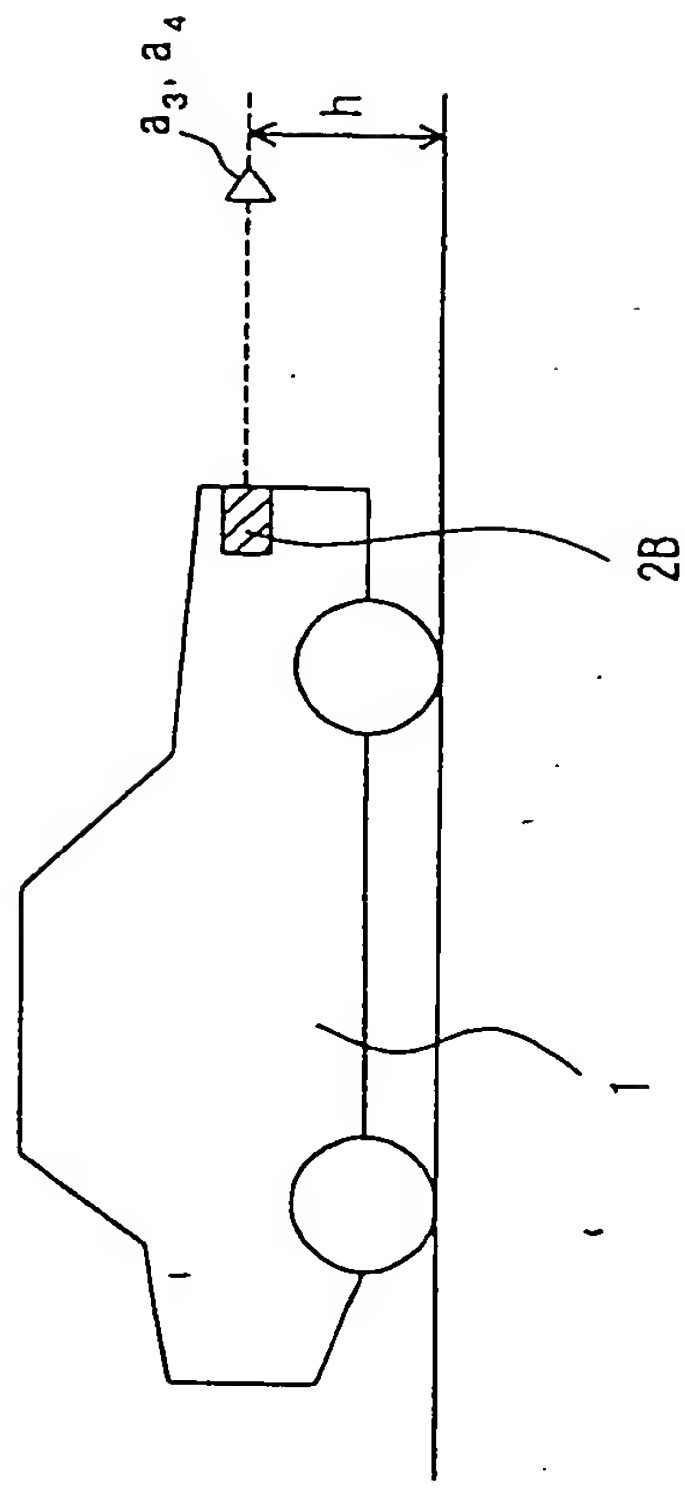
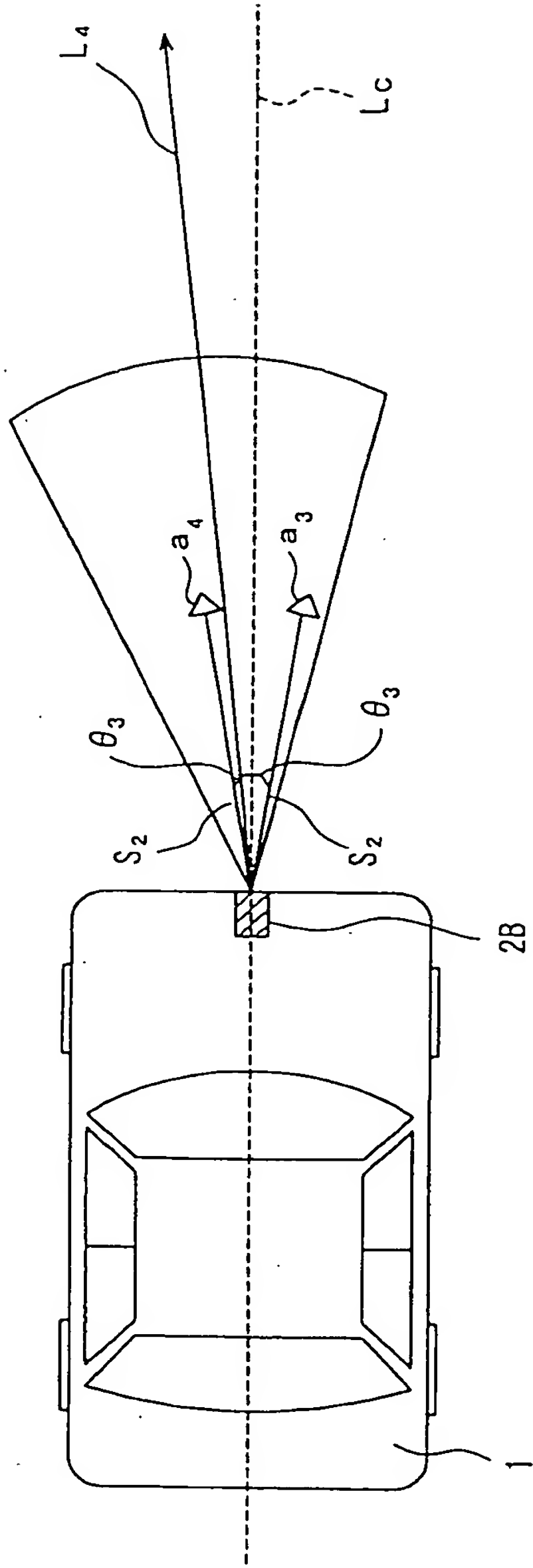


Fig. 8A

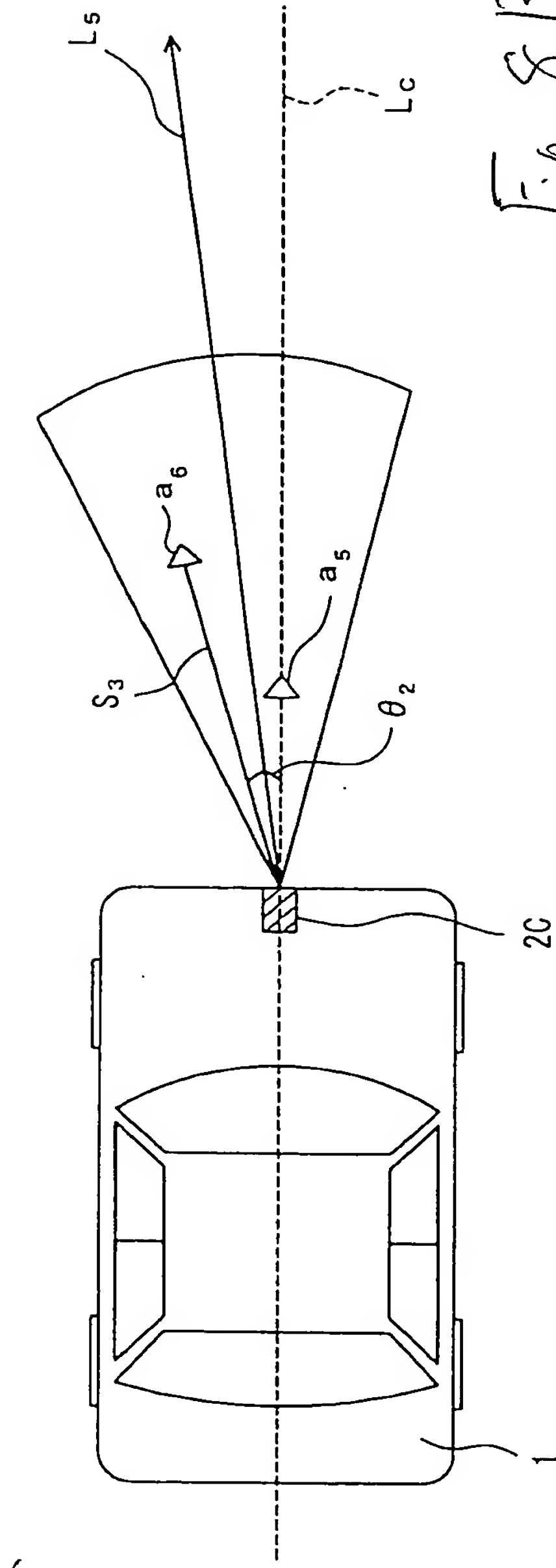
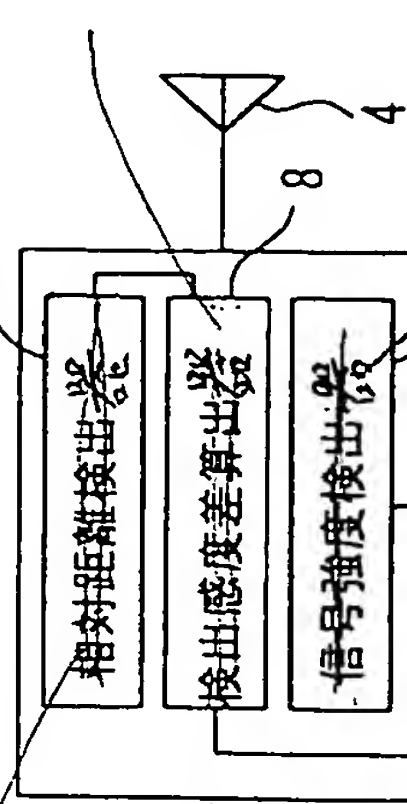


Fig. 8B

relative distance sensor

sensitivity difference calculation device



信号強度の出力

検出感度差の出力

signal intensity sensor

Output of sensitivity difference

out put of signal intensity

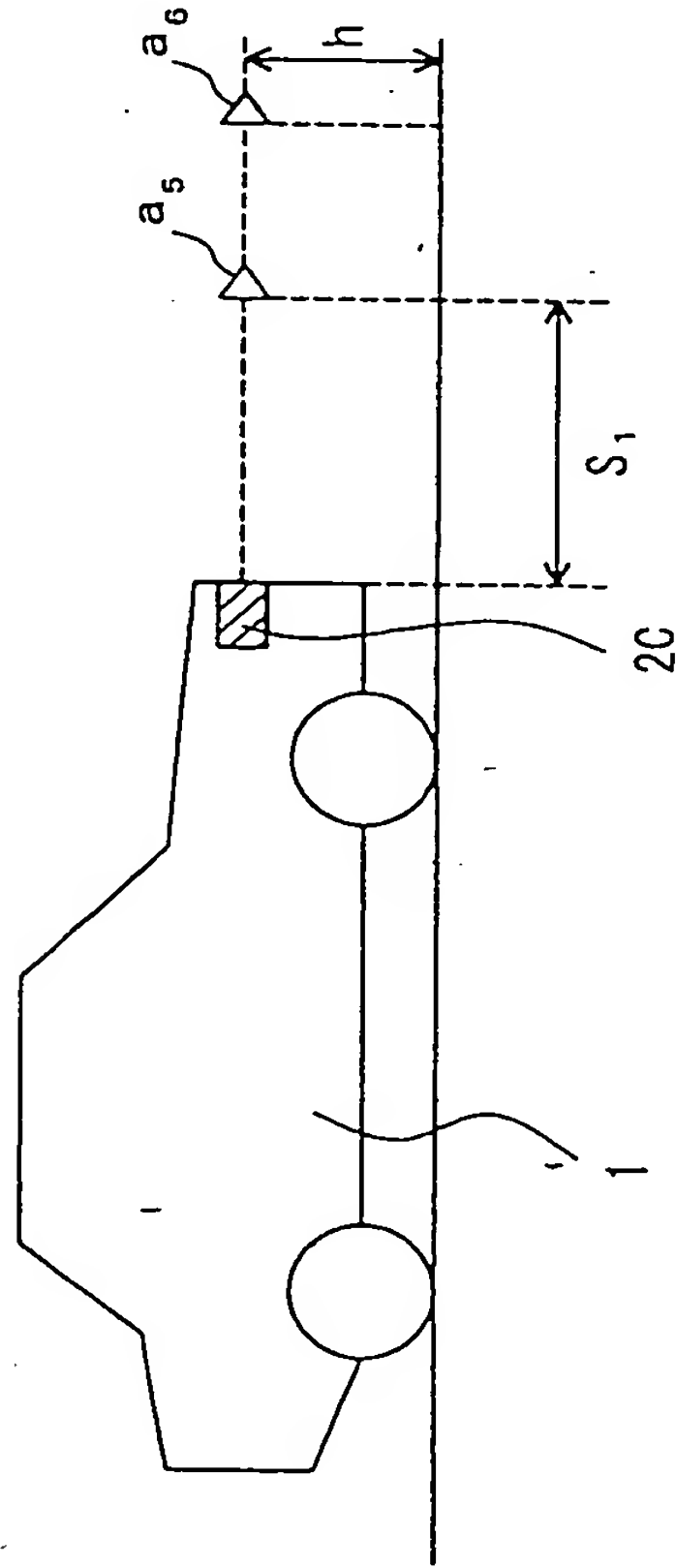


Fig. 9

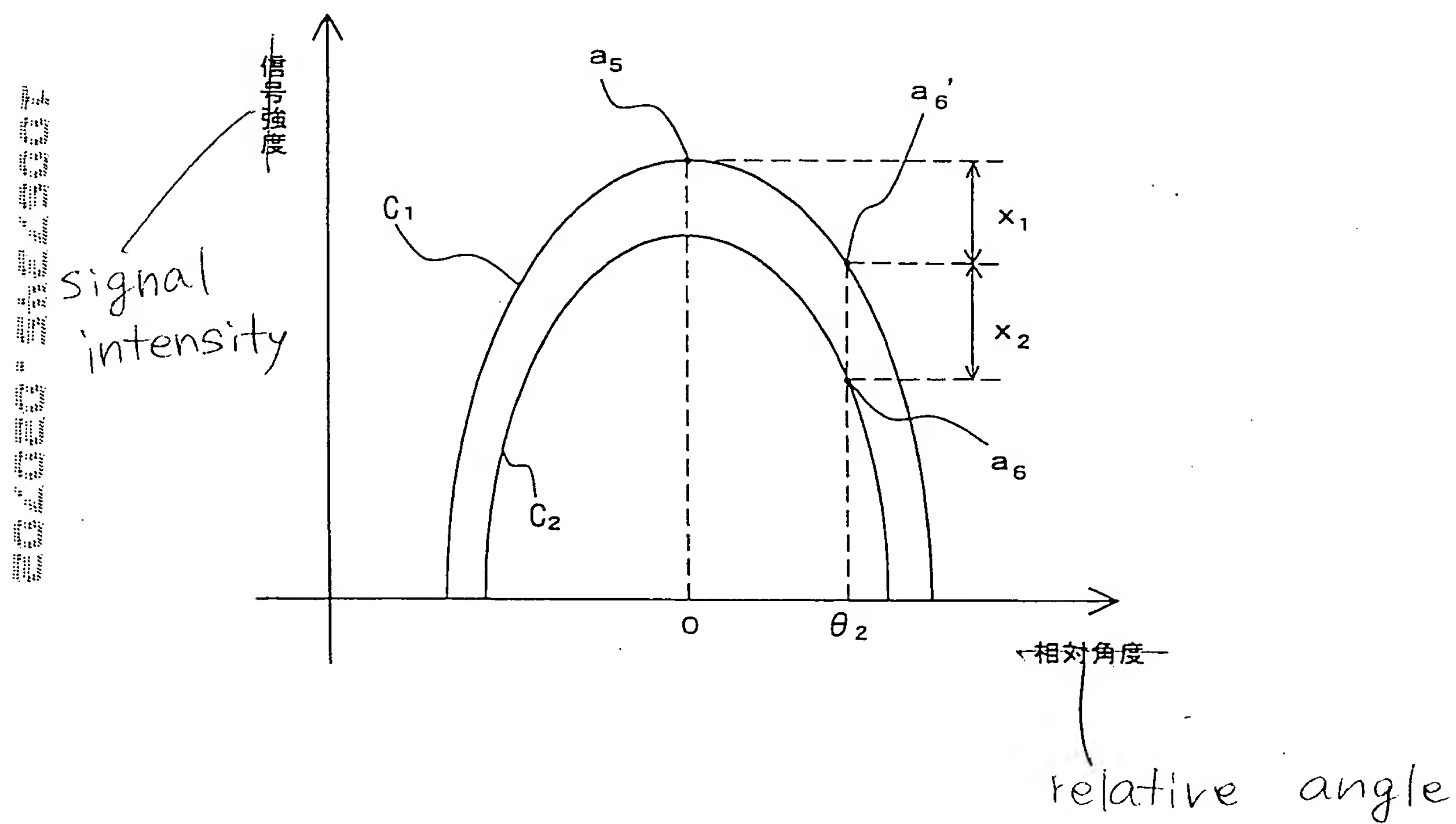


FIG. 10 is a schematic diagram of a vehicle 1 equipped with a sensor 20. The sensor 20 is mounted on the front of the vehicle 1 and emits a beam of light L₆ at an angle θ_3 relative to the horizontal axis L_c. The beam L₆ is reflected by a surface S₂ at a distance a₇ and a surface S₄ at a distance a₈. The sensor 20 is also equipped with a camera 21 and a display 22.

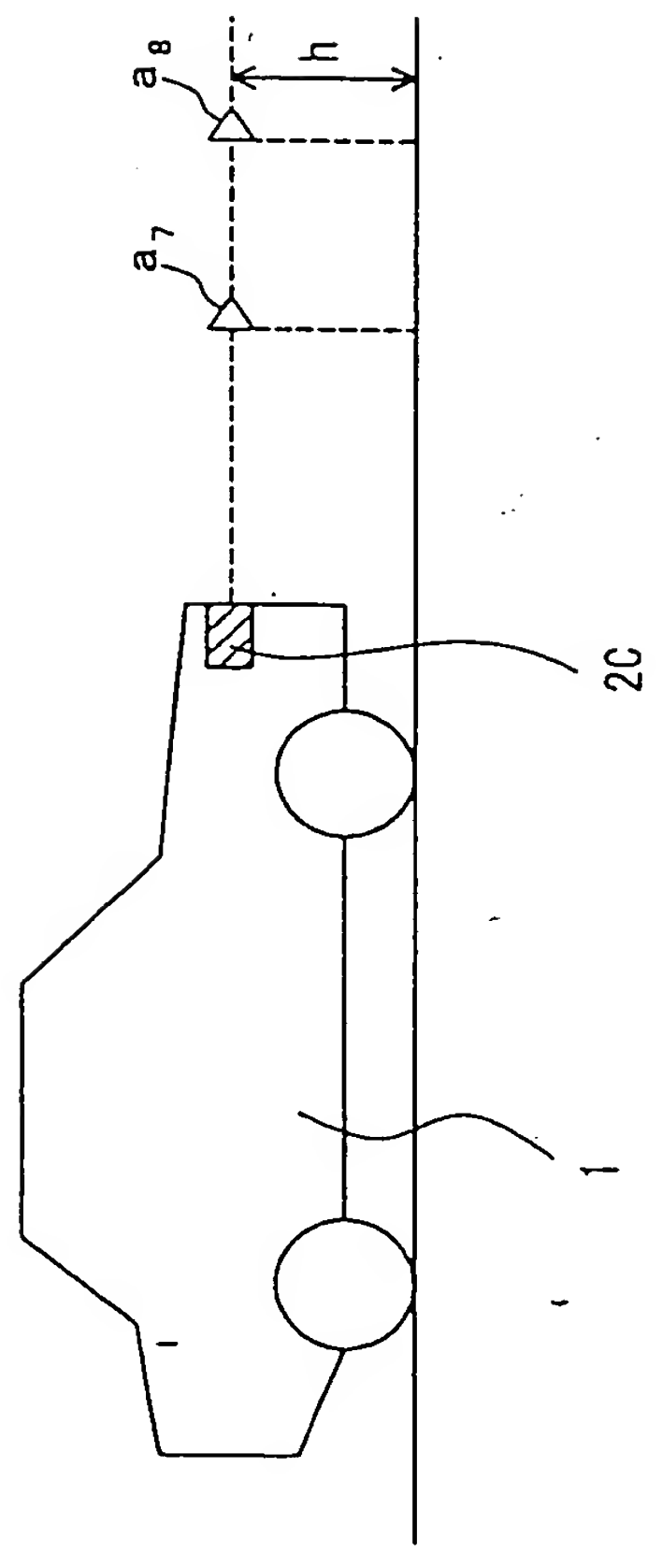
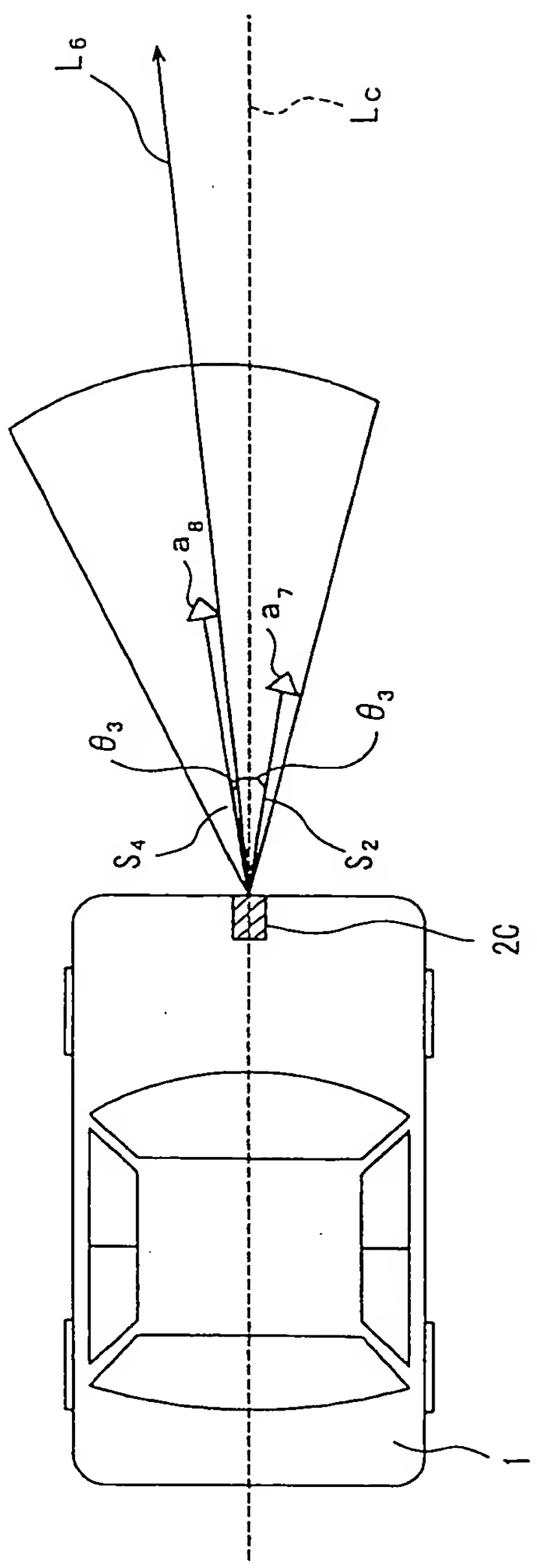


Fig. 10

Fig. 11

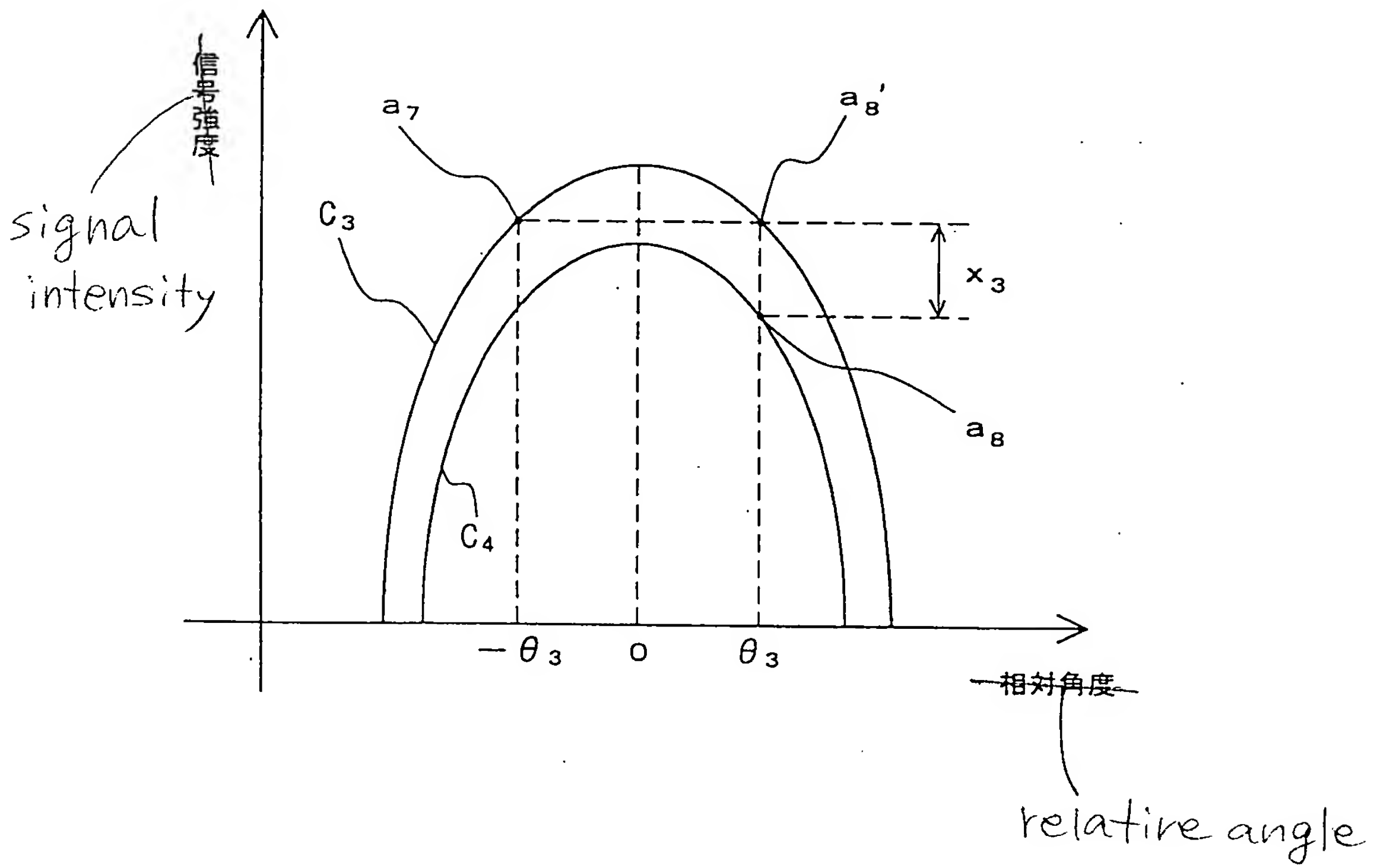


Fig. 12

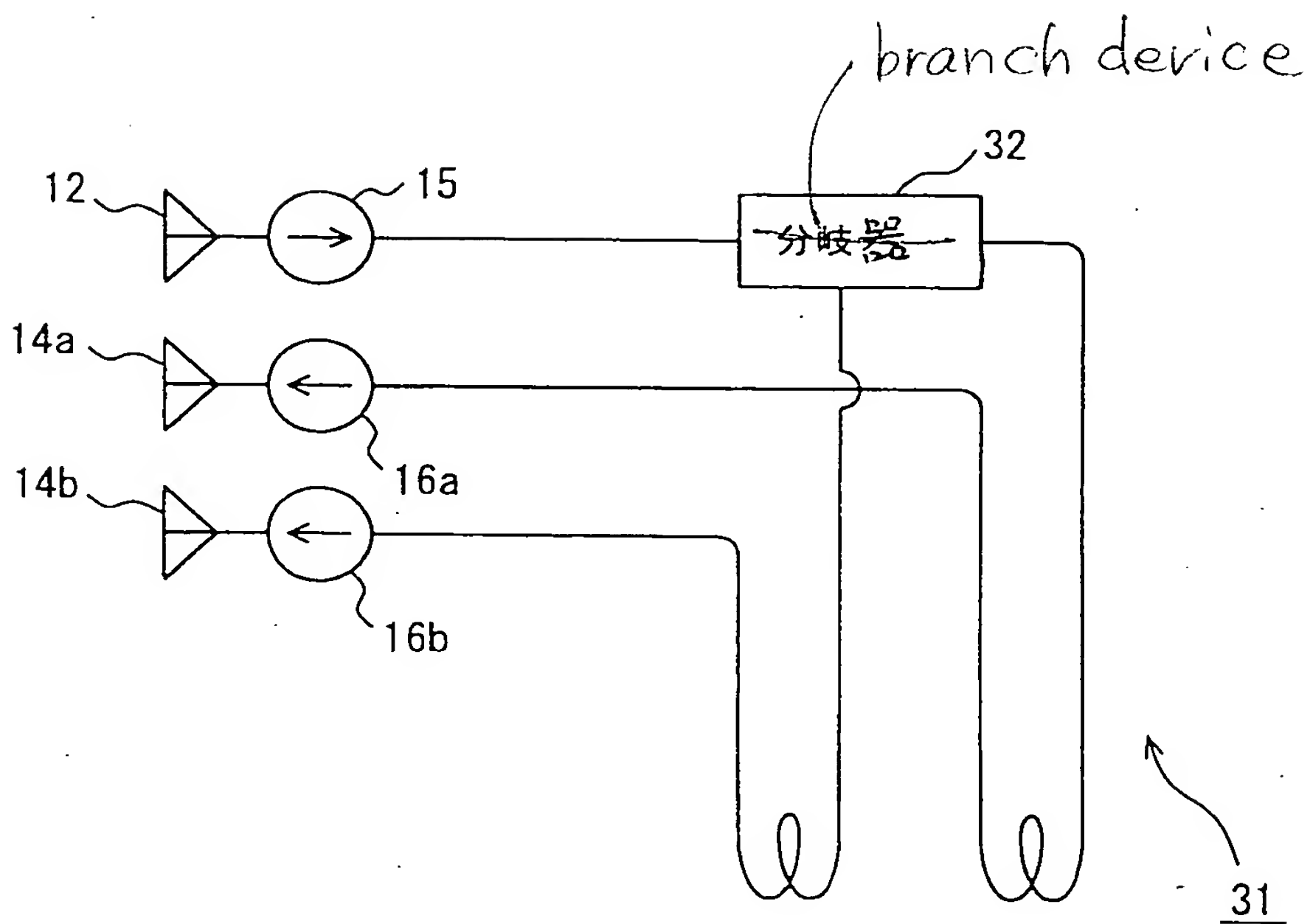


Fig. 13A

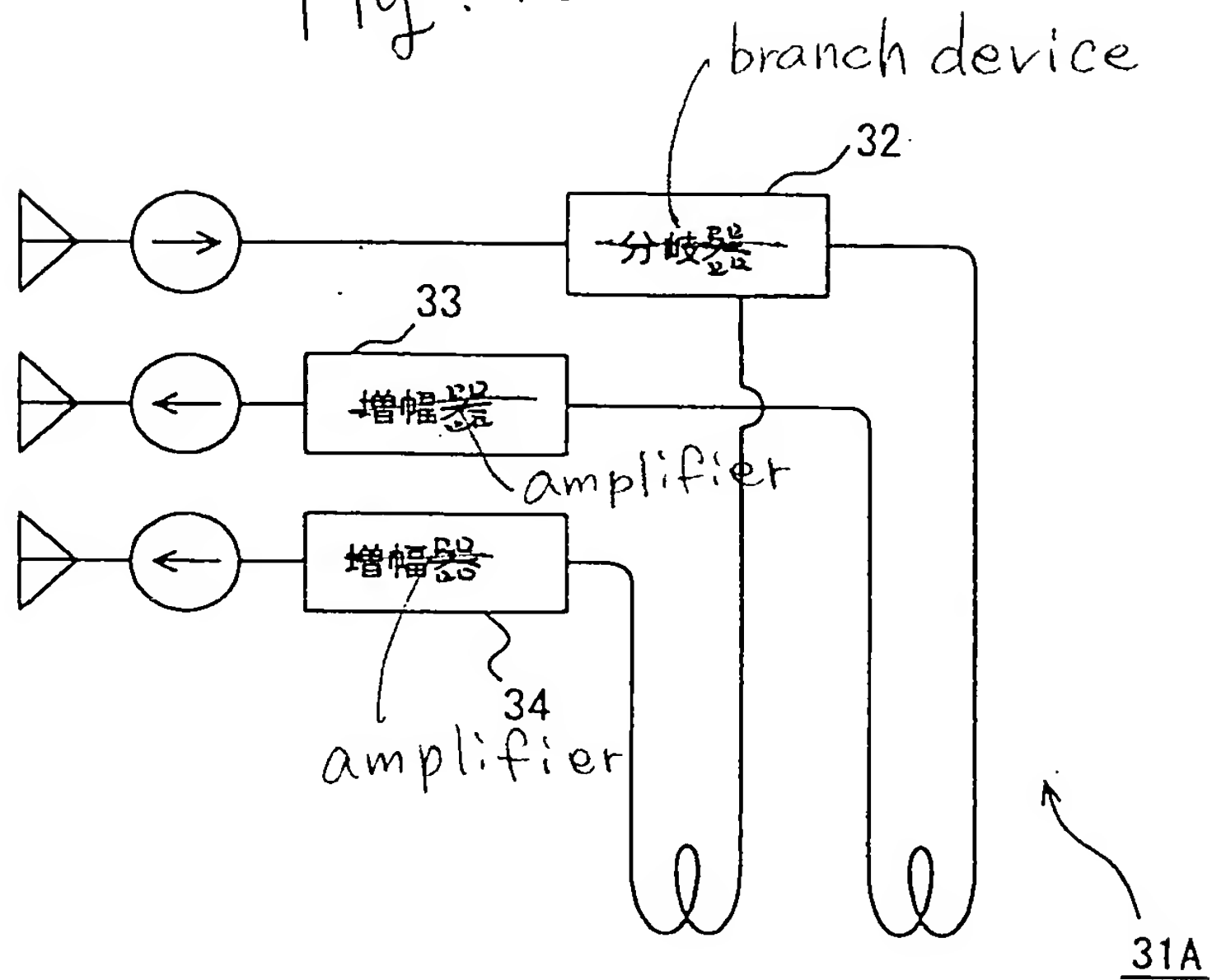


Fig. 13B

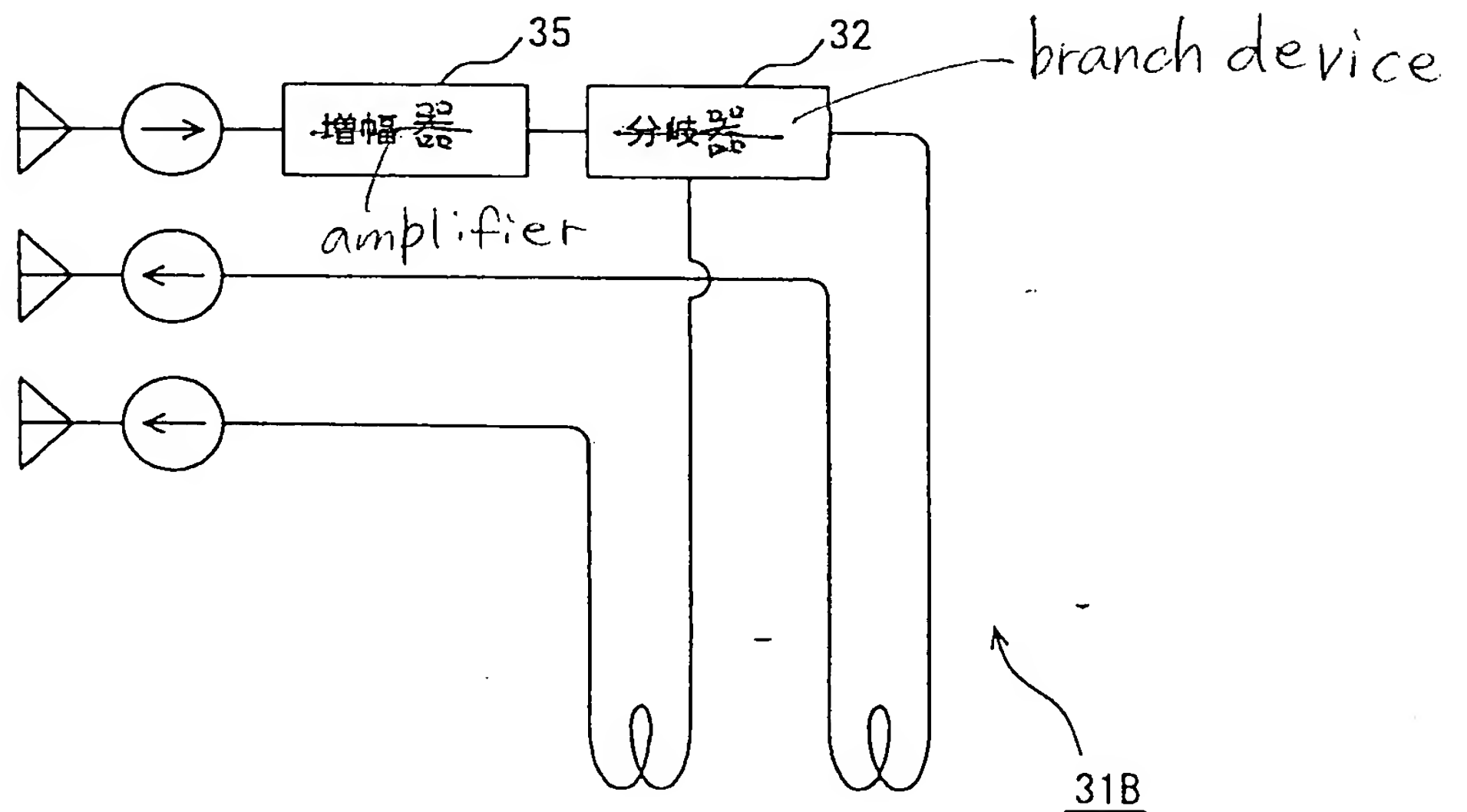
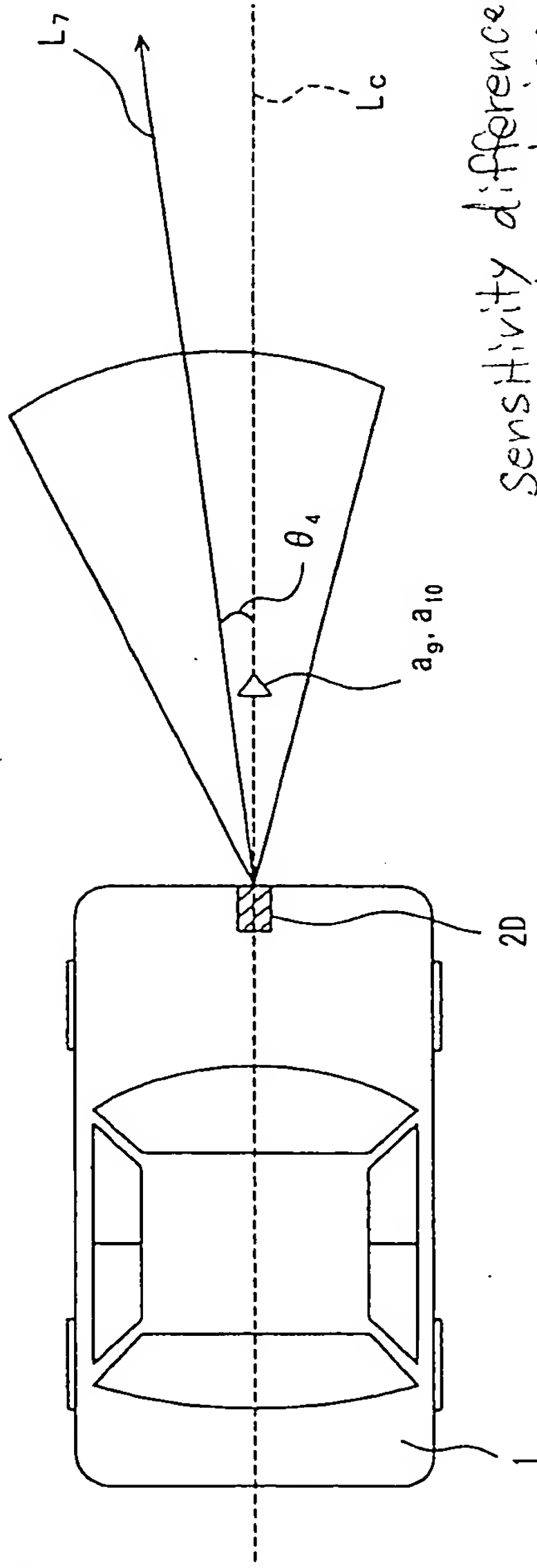


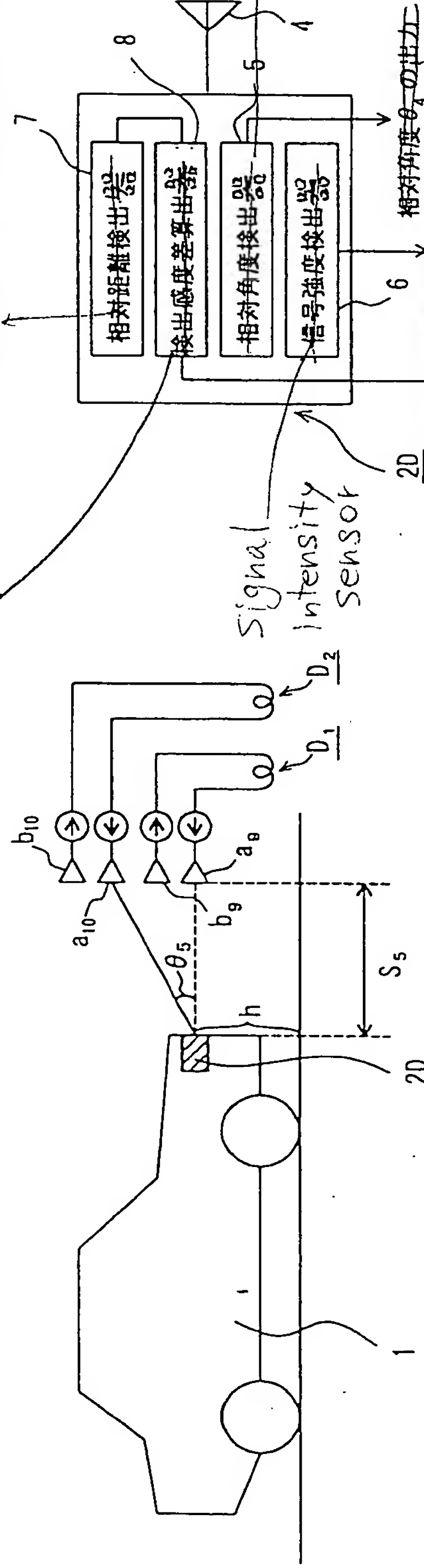
Fig. 14A

Fig. 14A is a perspective view of a vehicle 1 equipped with a sensor unit 20. The sensor unit 20 is mounted on the roof of the vehicle 1. A dashed line L_c represents the center line of the vehicle. A sensor beam is shown at an angle θ_4 from the center line, with a horizontal distance a_9, a_{10} and a vertical distance L_7 indicated. The sensor unit 20 is also shown in a side view below, with a horizontal distance a_8 and a vertical distance b_9 from the center line, and a horizontal distance b_{10} and a vertical distance a_{10} from the sensor beam. The sensor unit 20 is also shown in a top view below, with a horizontal distance a_8 and a vertical distance b_9 from the center line, and a horizontal distance b_{10} and a vertical distance a_{10} from the sensor beam. The sensor unit 20 is also shown in a side view below, with a horizontal distance a_8 and a vertical distance b_9 from the center line, and a horizontal distance b_{10} and a vertical distance a_{10} from the sensor beam.



Sensitivity difference calculation device Fig. 14B

relative distance sensor



signal intensity sensor

relative angle sensor

output of relative angle θ_4

output of sensitivity difference

output of signal intensity

Fig. 15

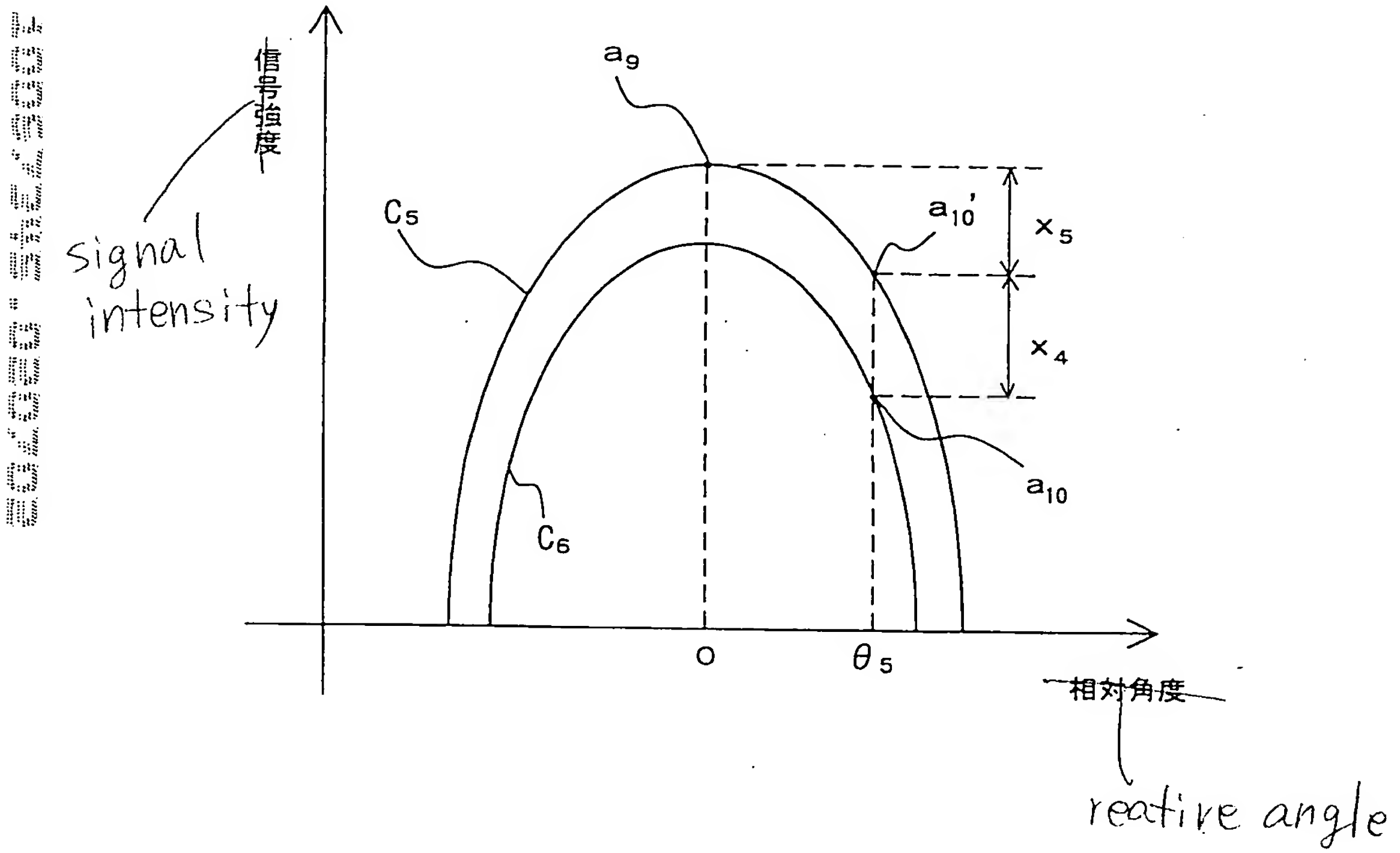


Fig. 16A

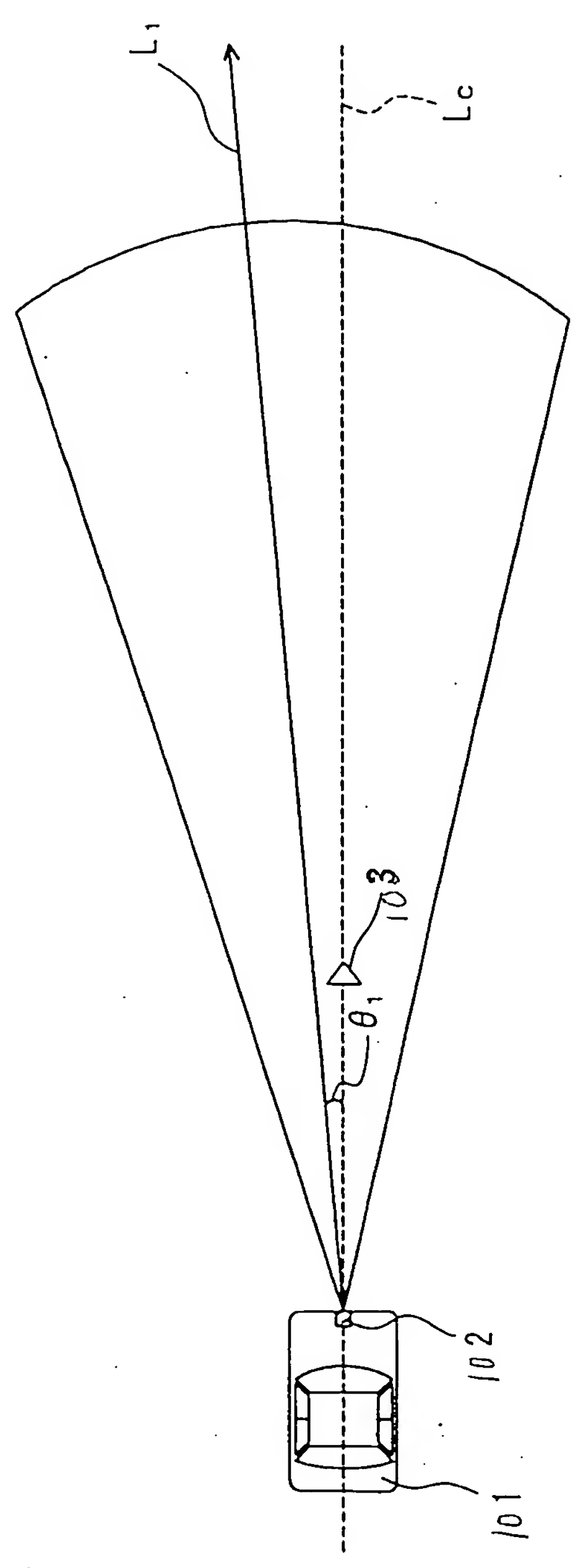


Fig. 16B

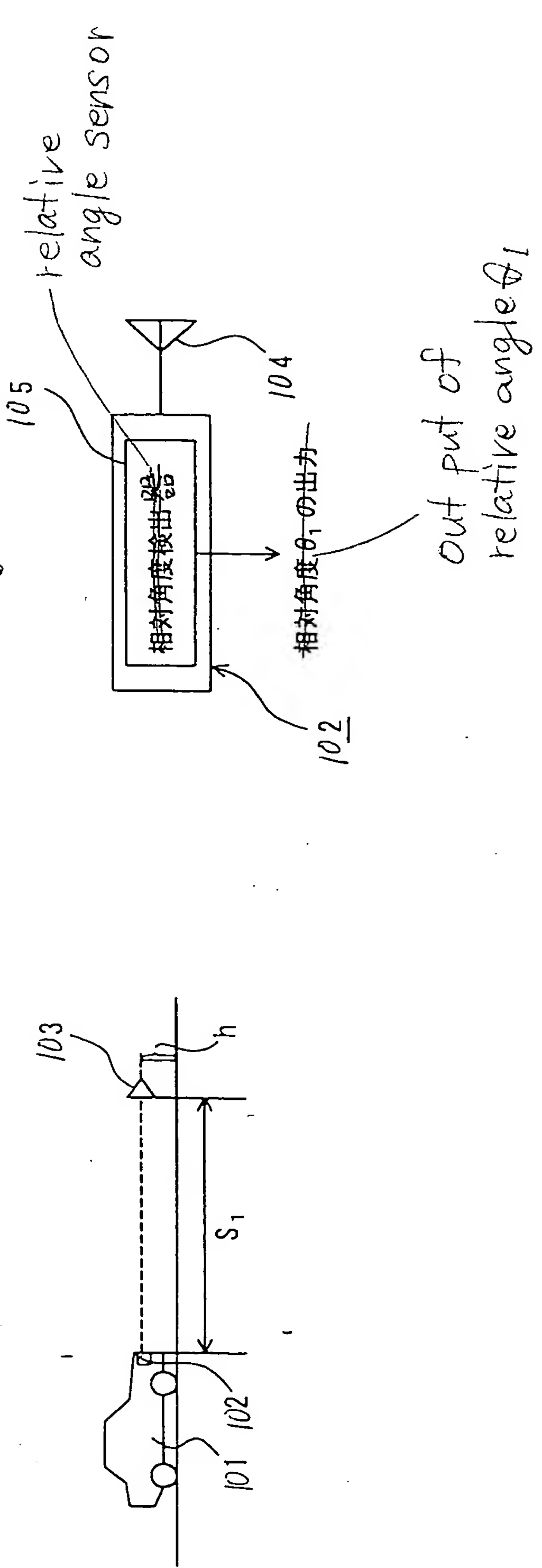


Fig. 17A

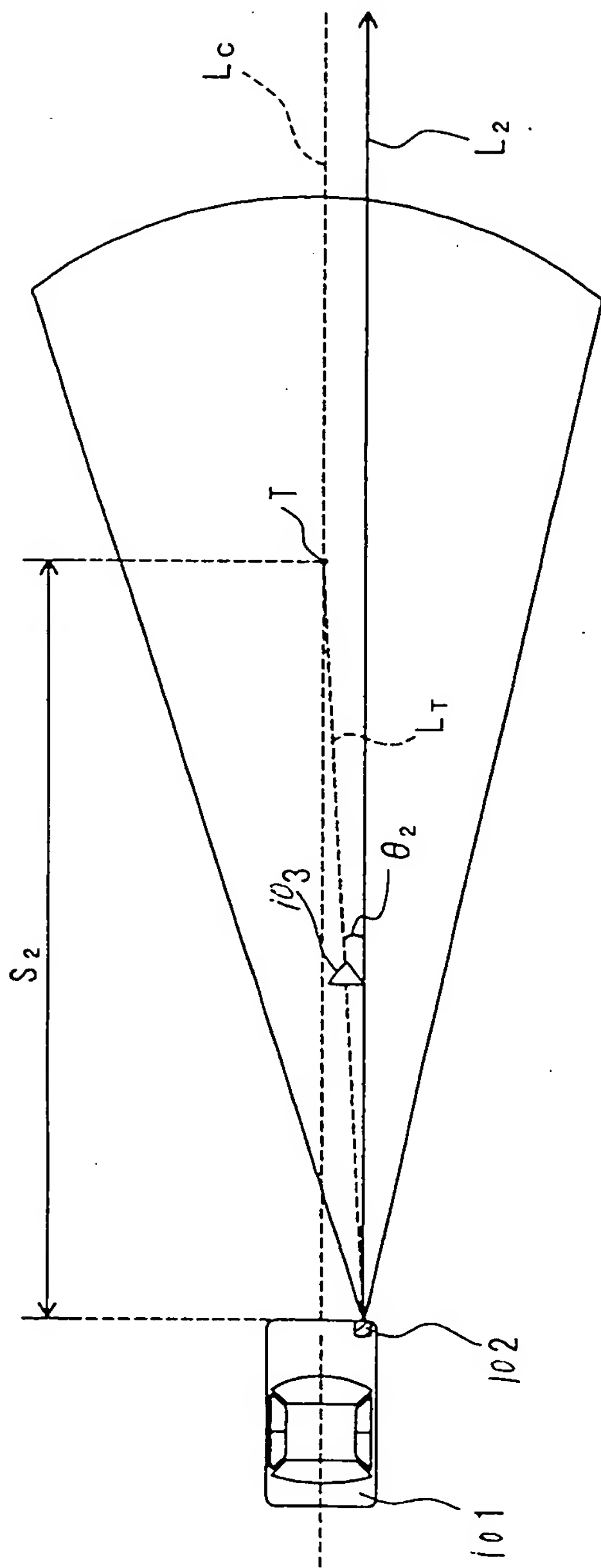


Fig. 17B

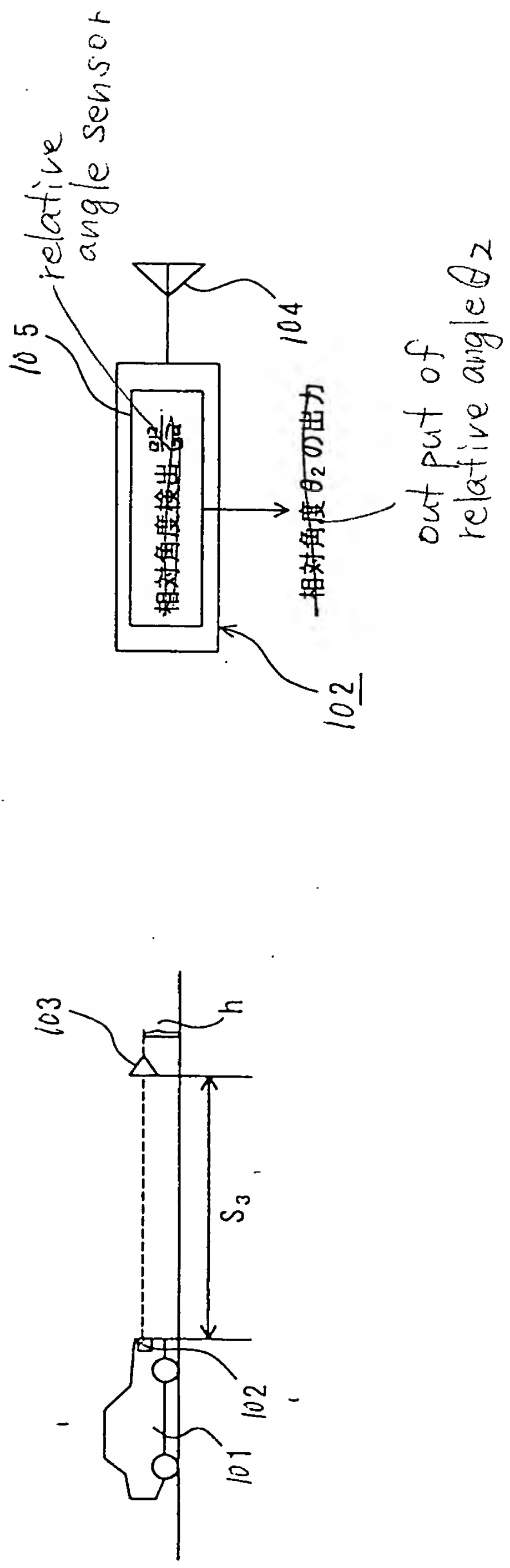


Fig. 18A

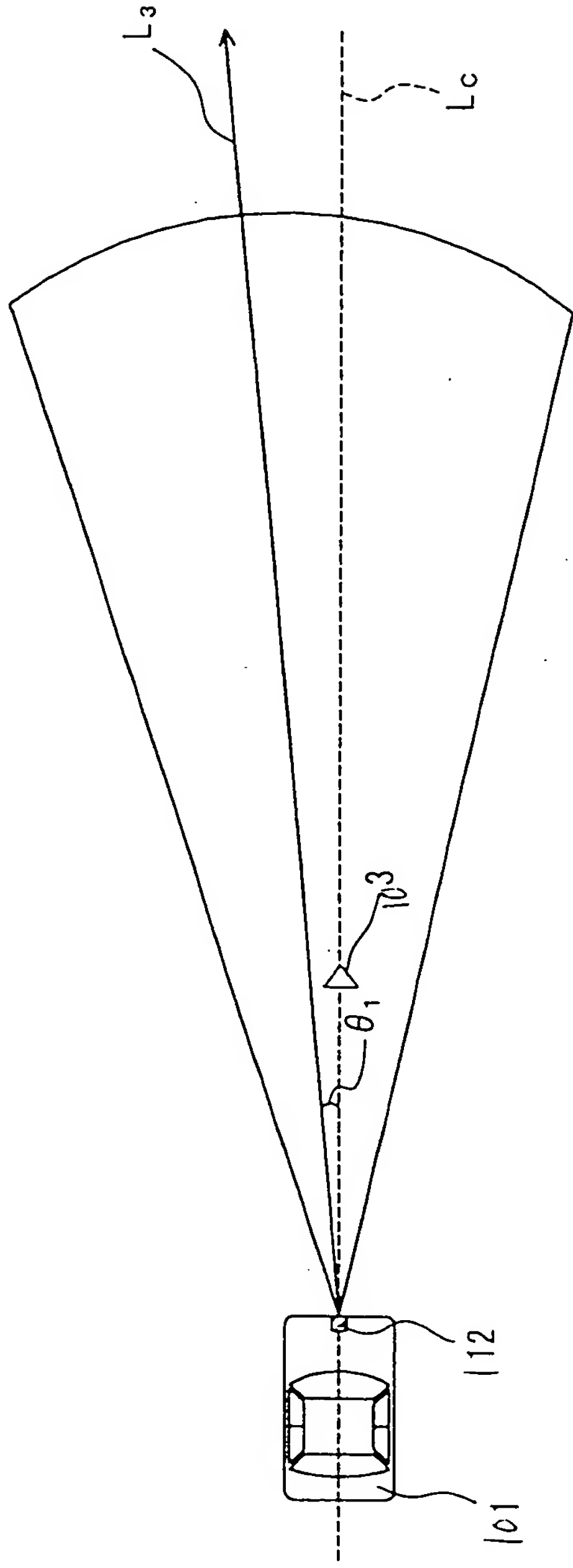


Fig. 18B

reflection
intensity sensor

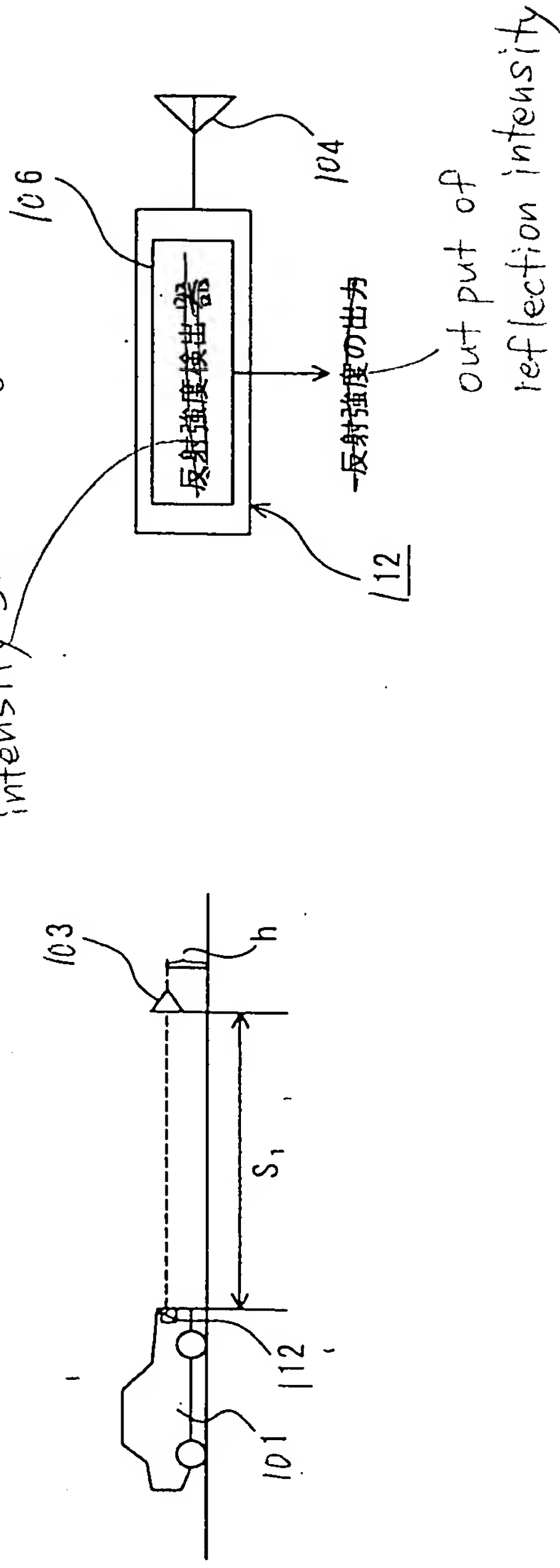


Fig. 19

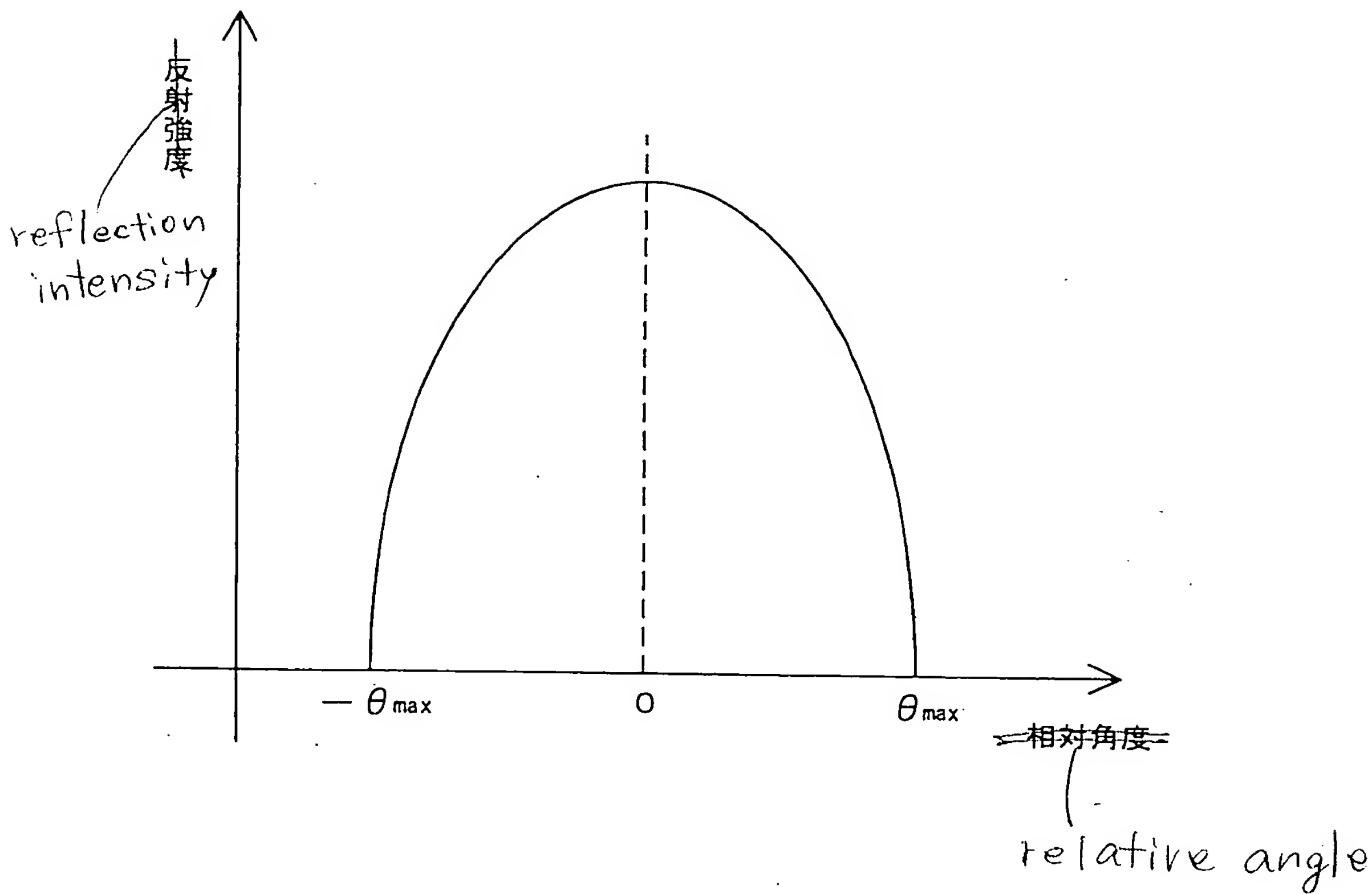


Fig. 20A

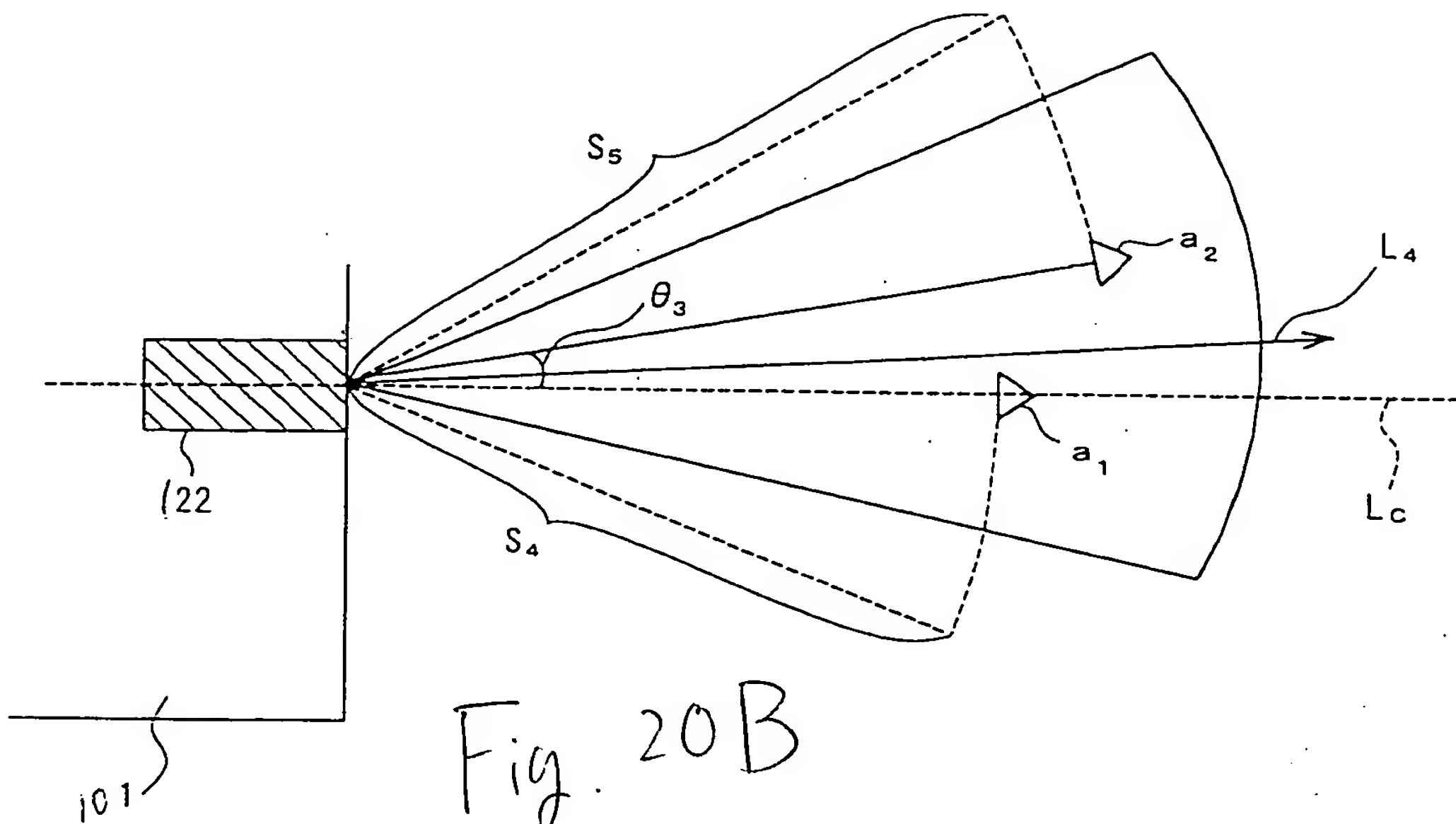


Fig. 20B

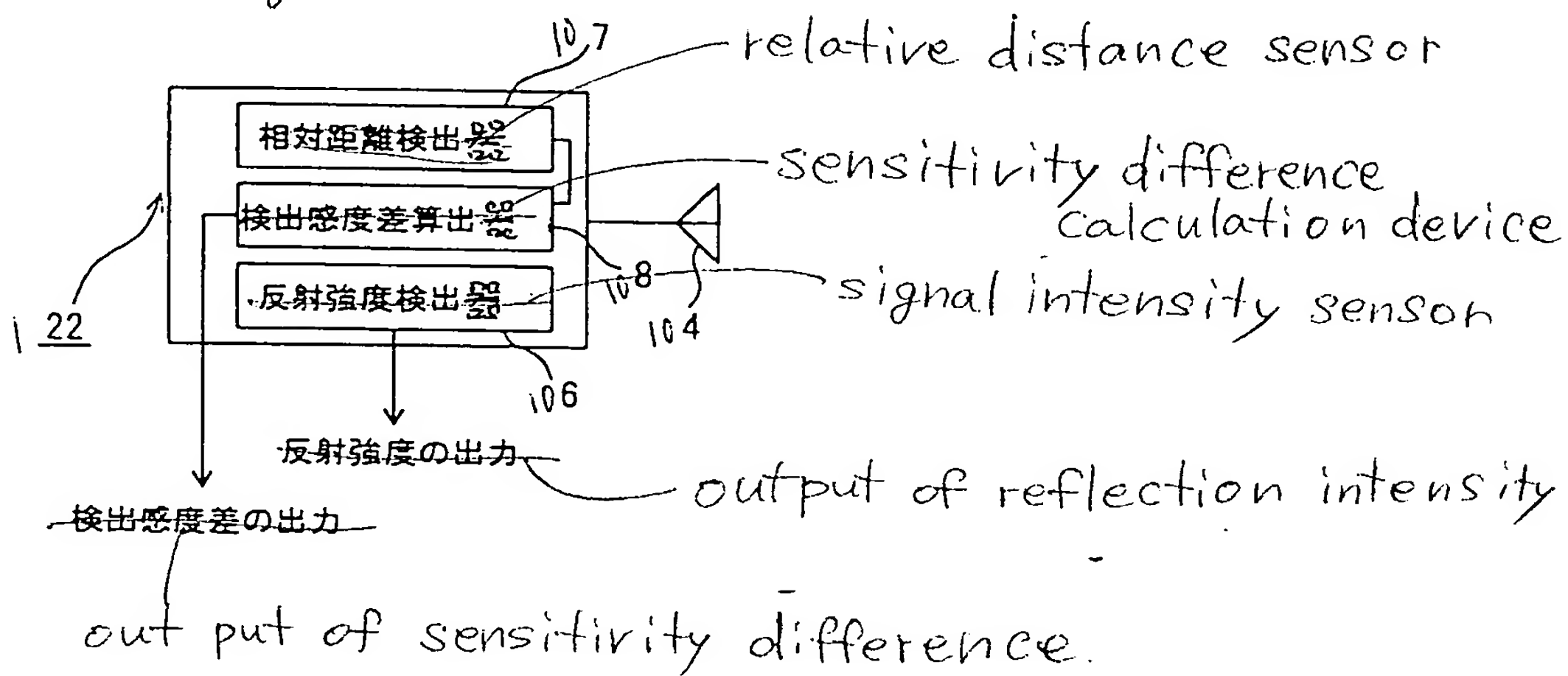


Fig. 21

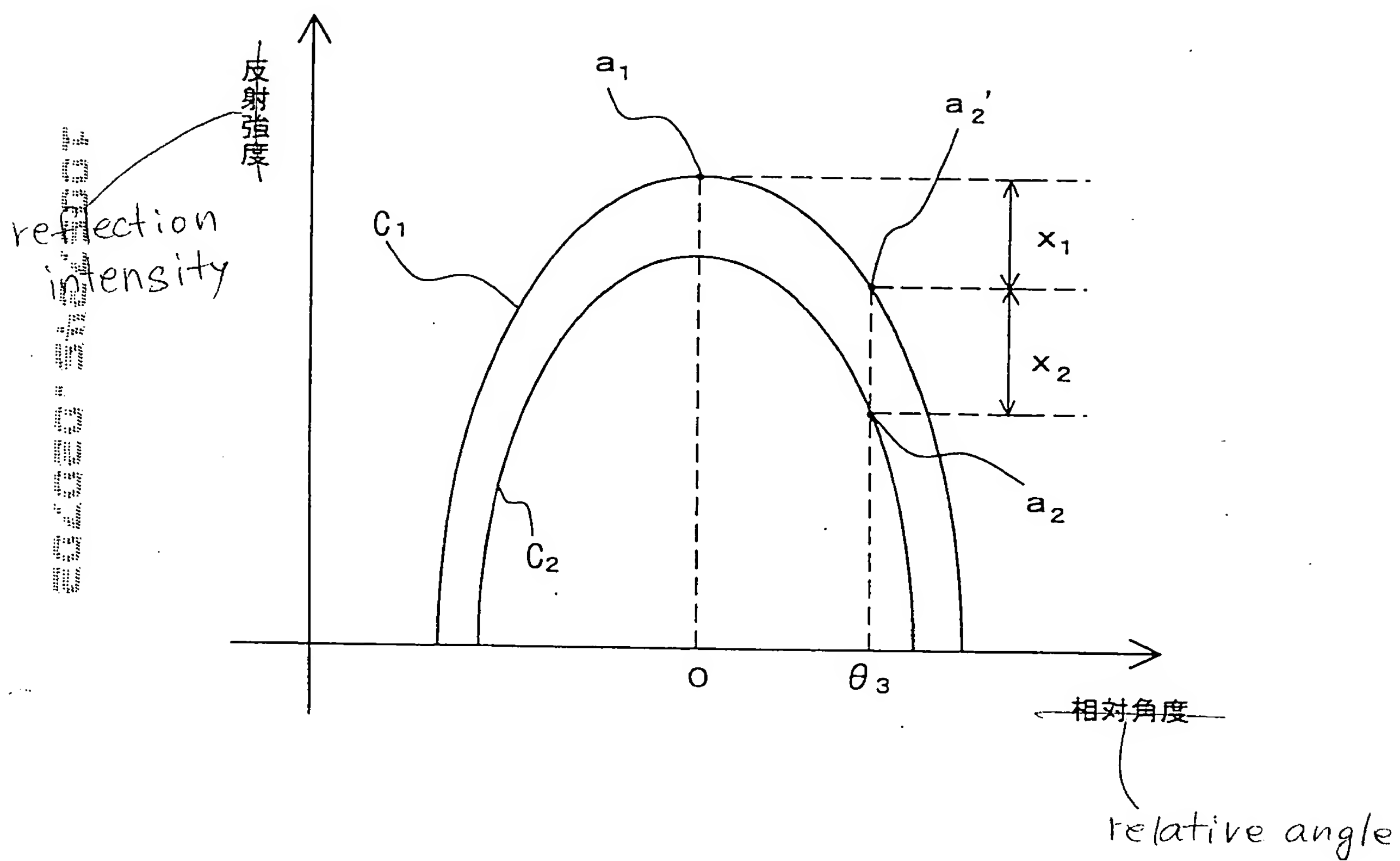


Fig. 22A

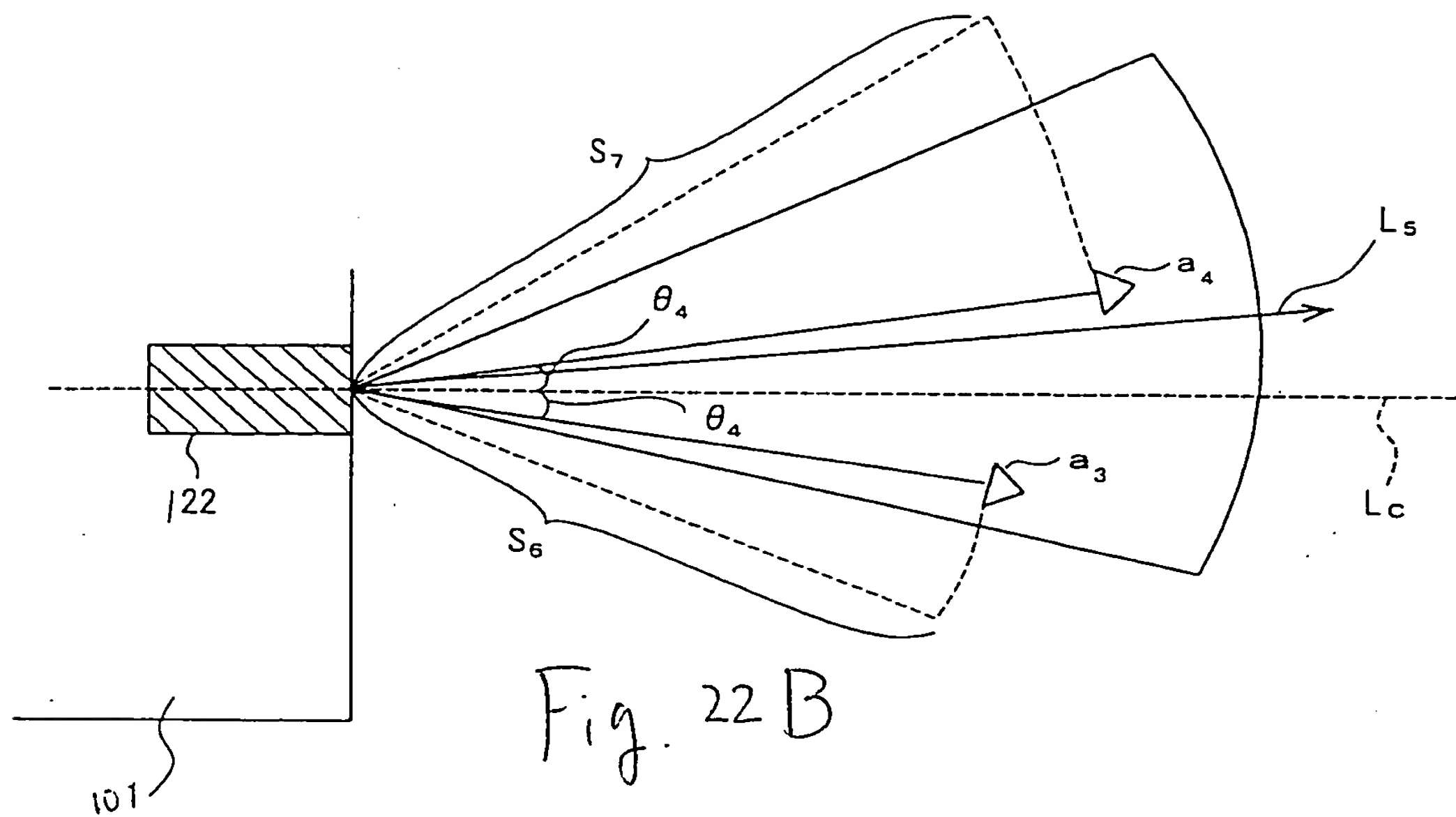


Fig. 22B

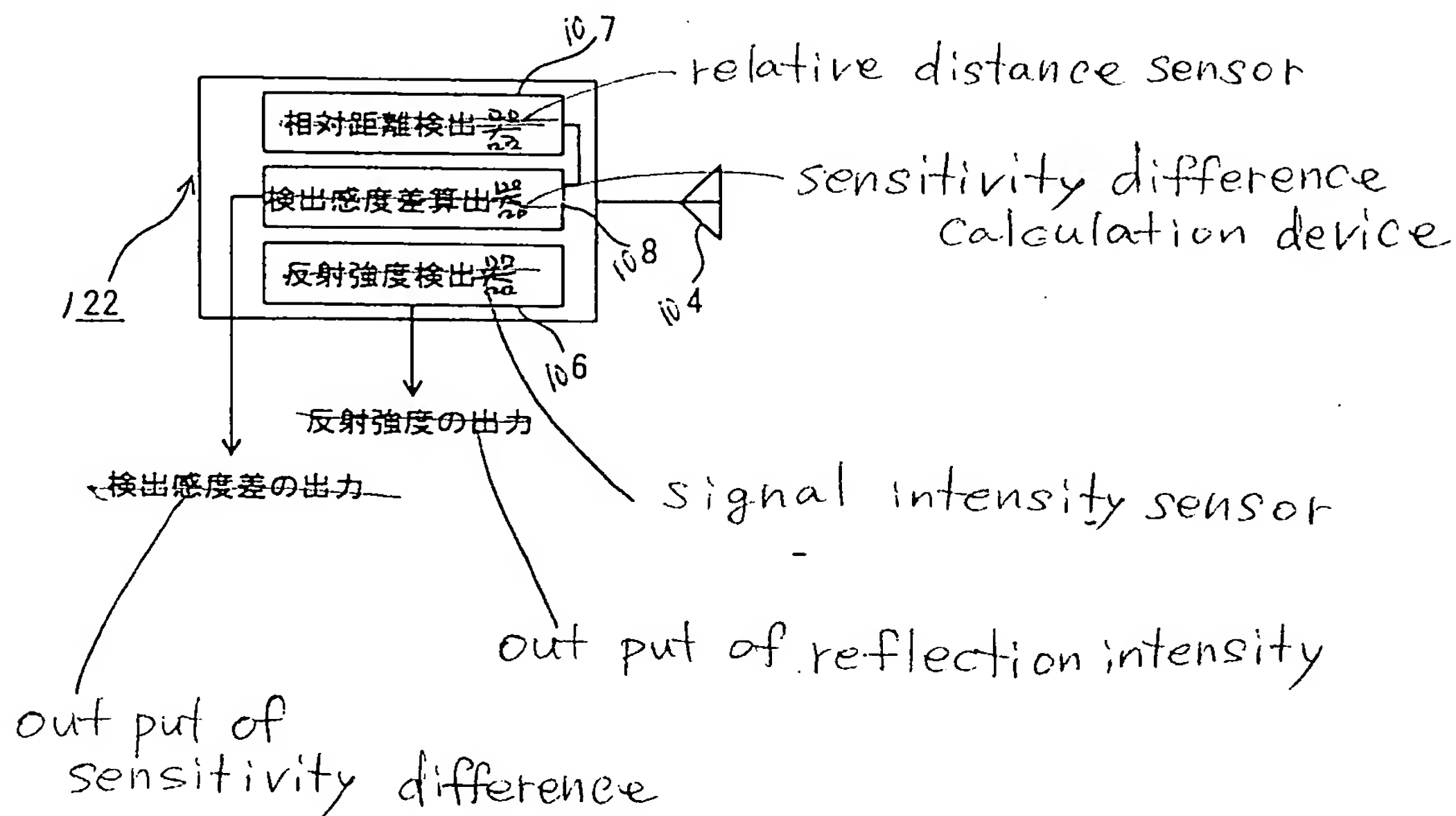


Fig. 23

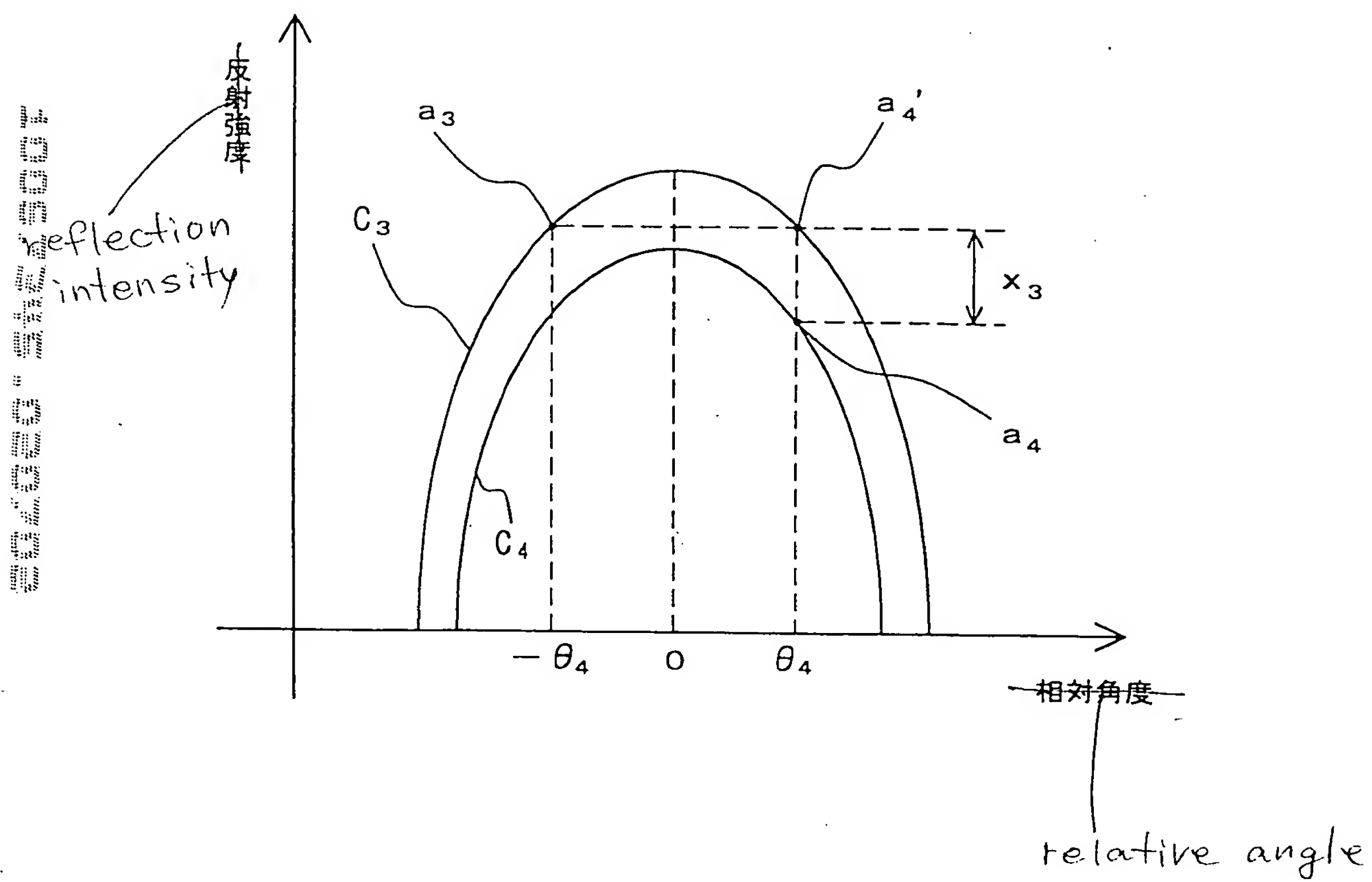


Fig. 24C = Fig. 24D

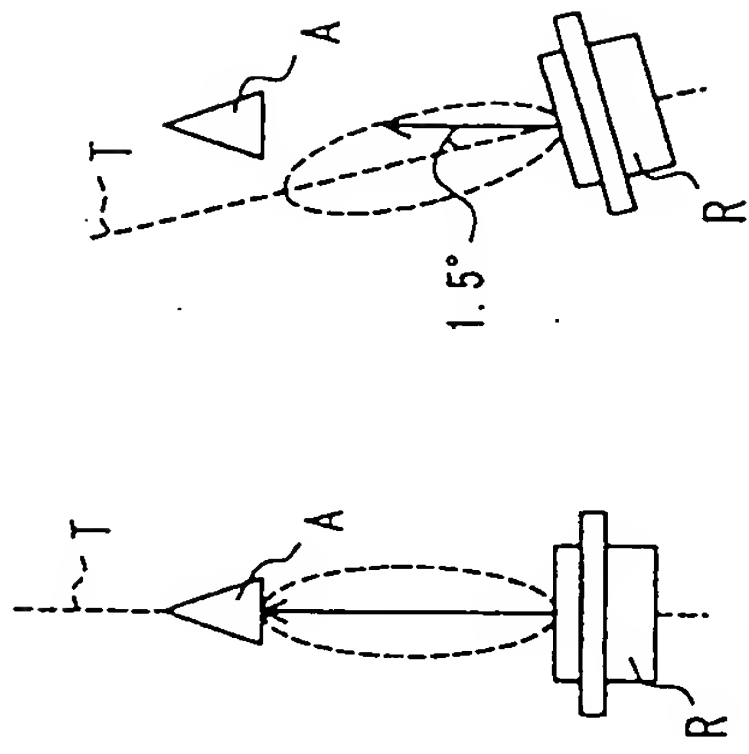


Fig. 24B

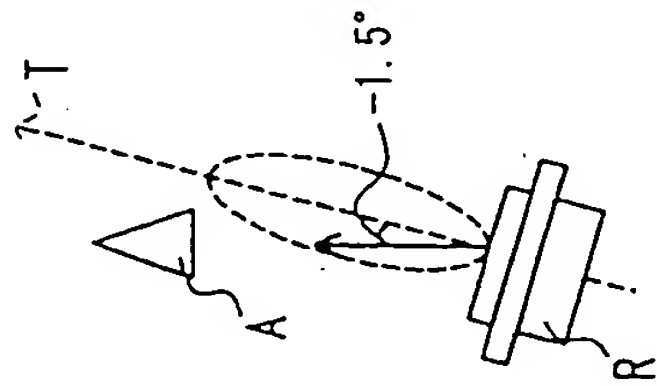


Fig. 24A

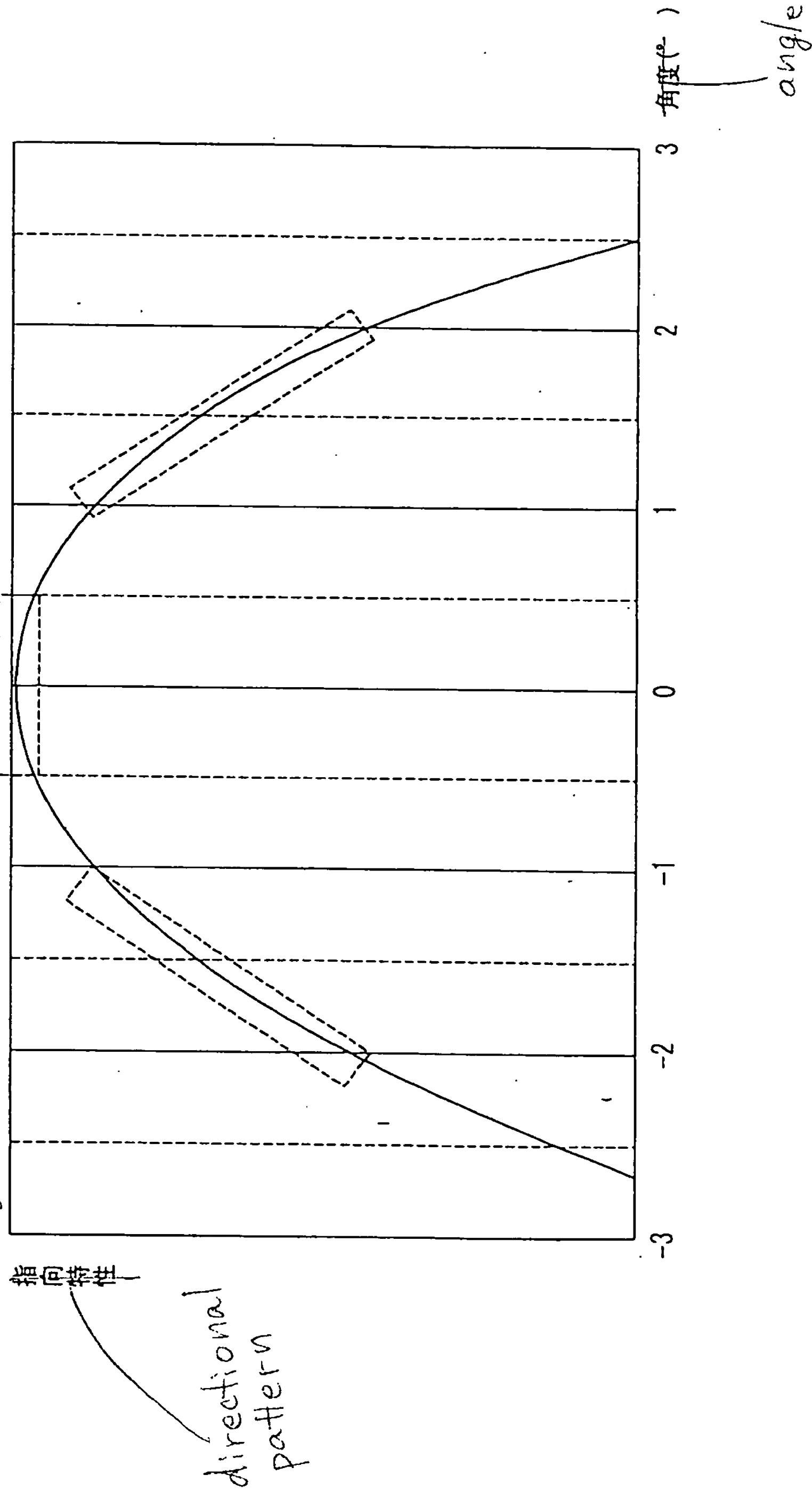


Fig. 25A

receiving level

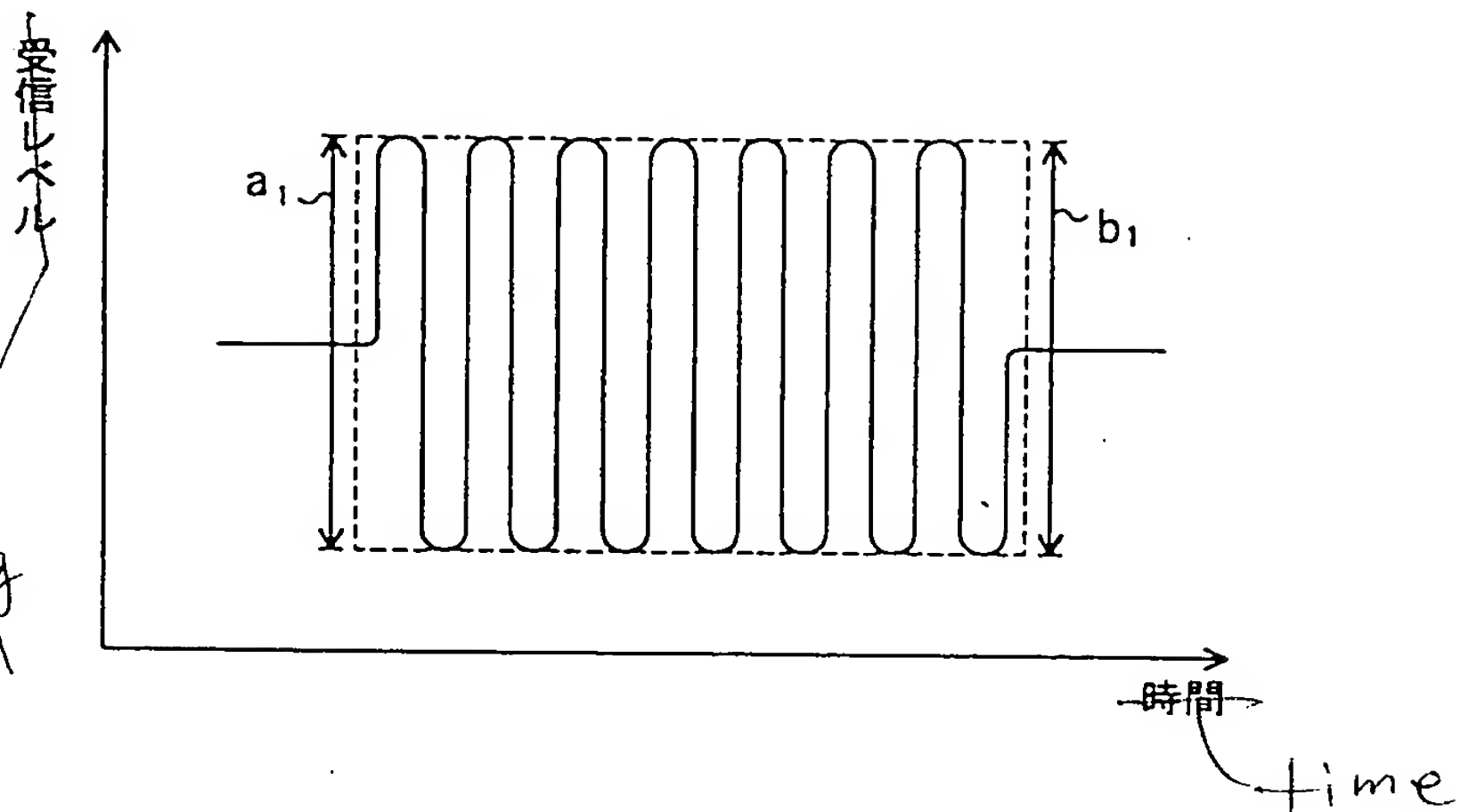


Fig. 25B

receiving level

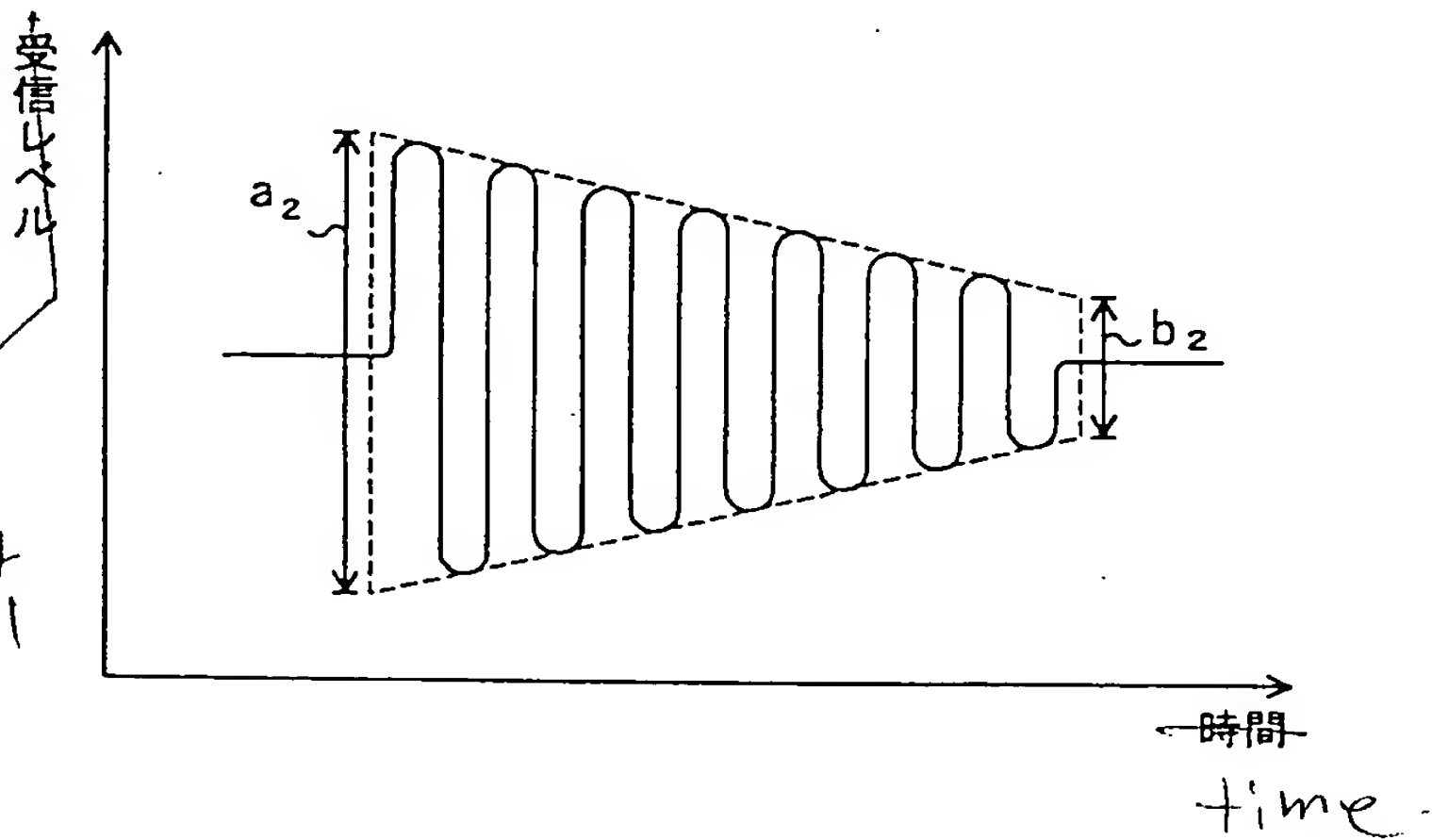
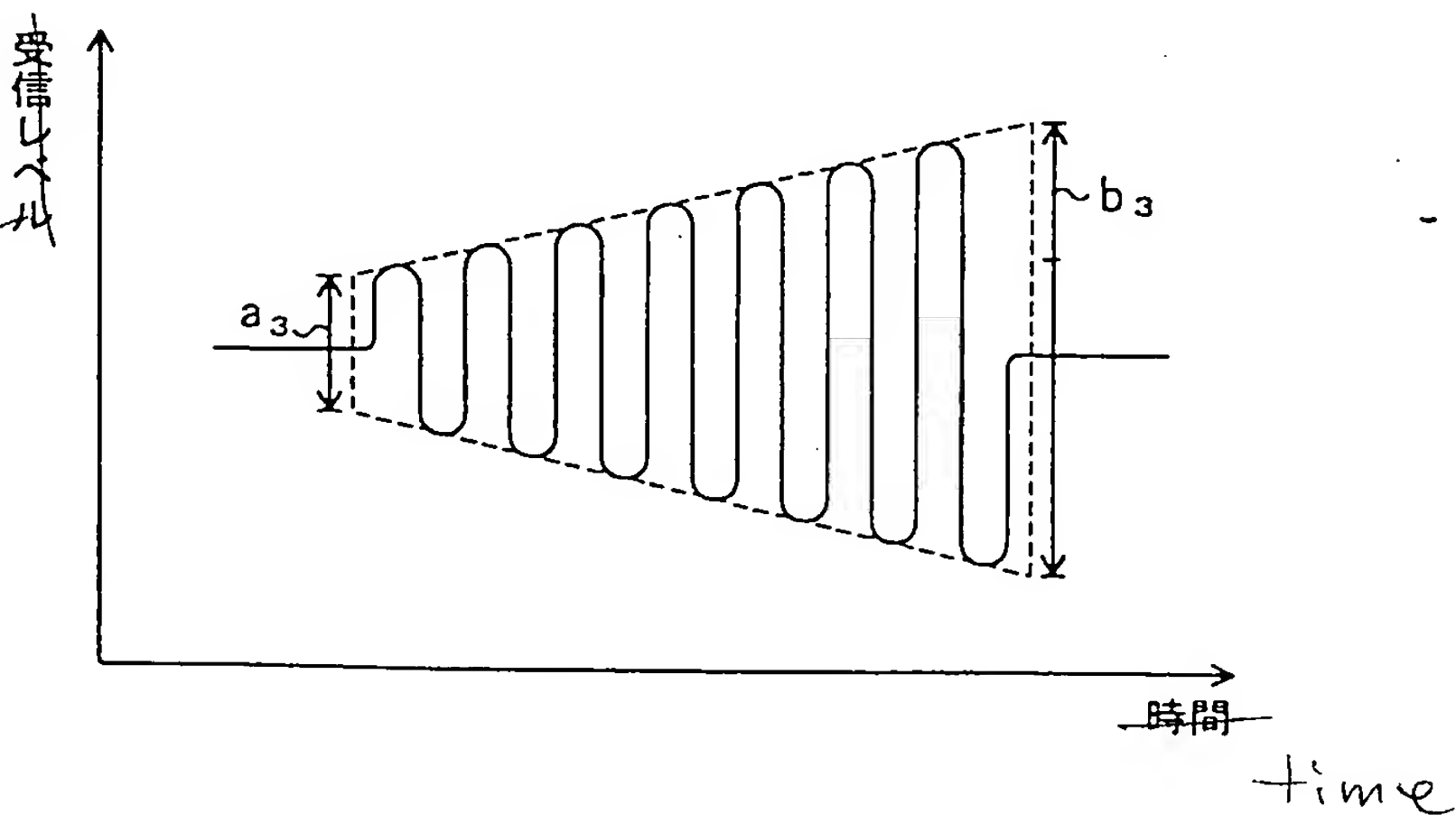


Fig. 25C

receiving level



Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

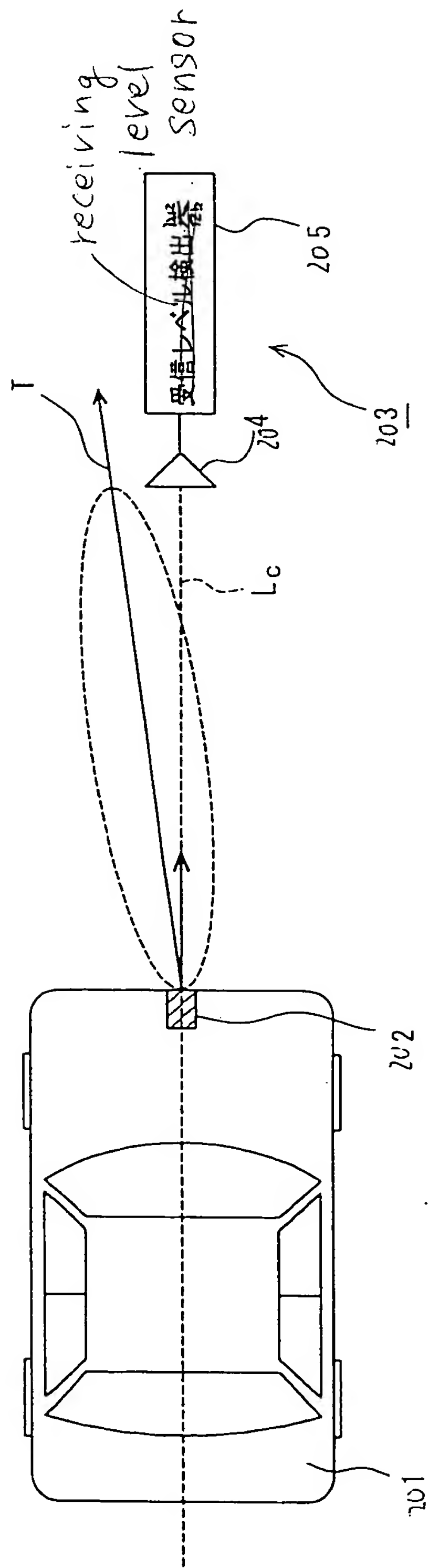


Fig. 27

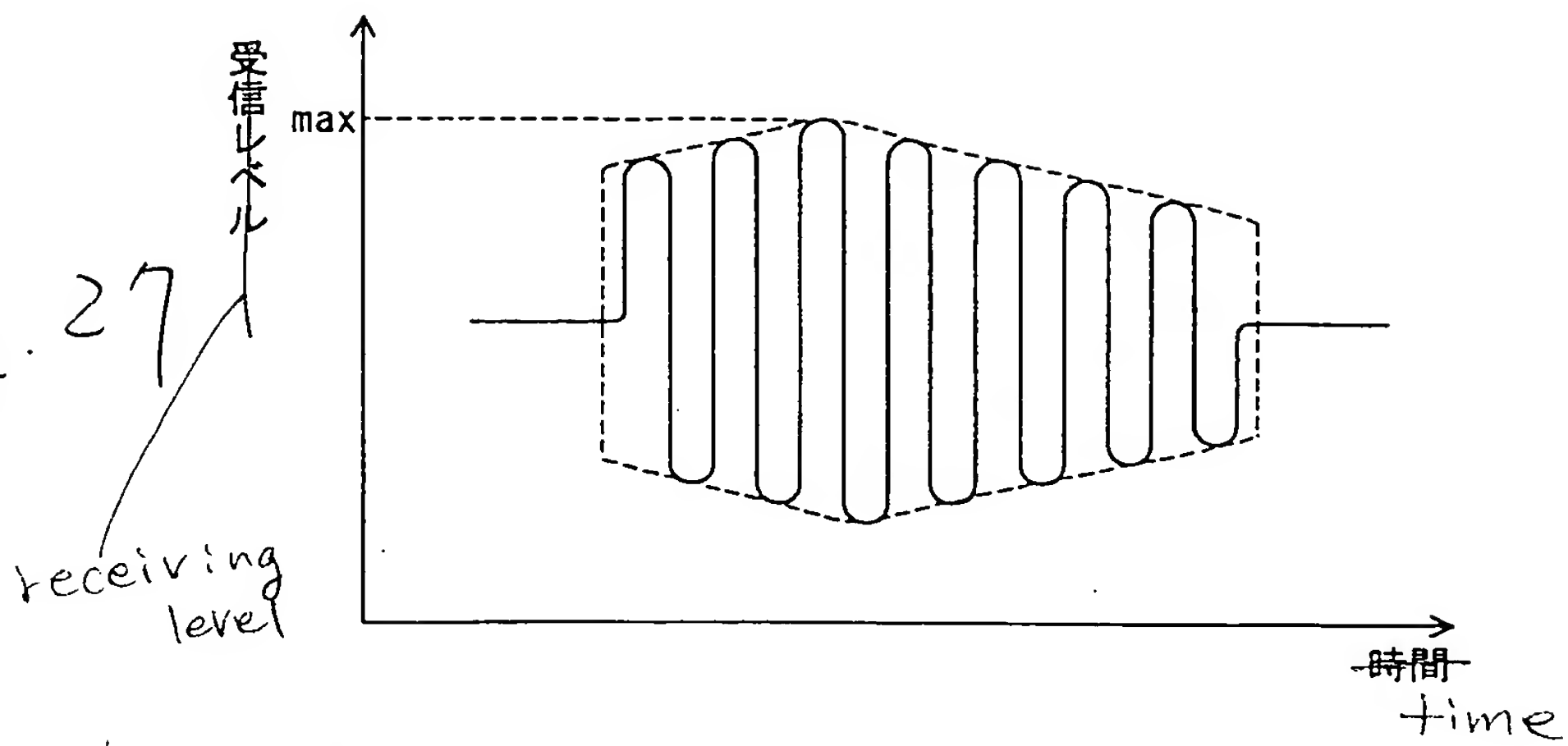


Fig. 28

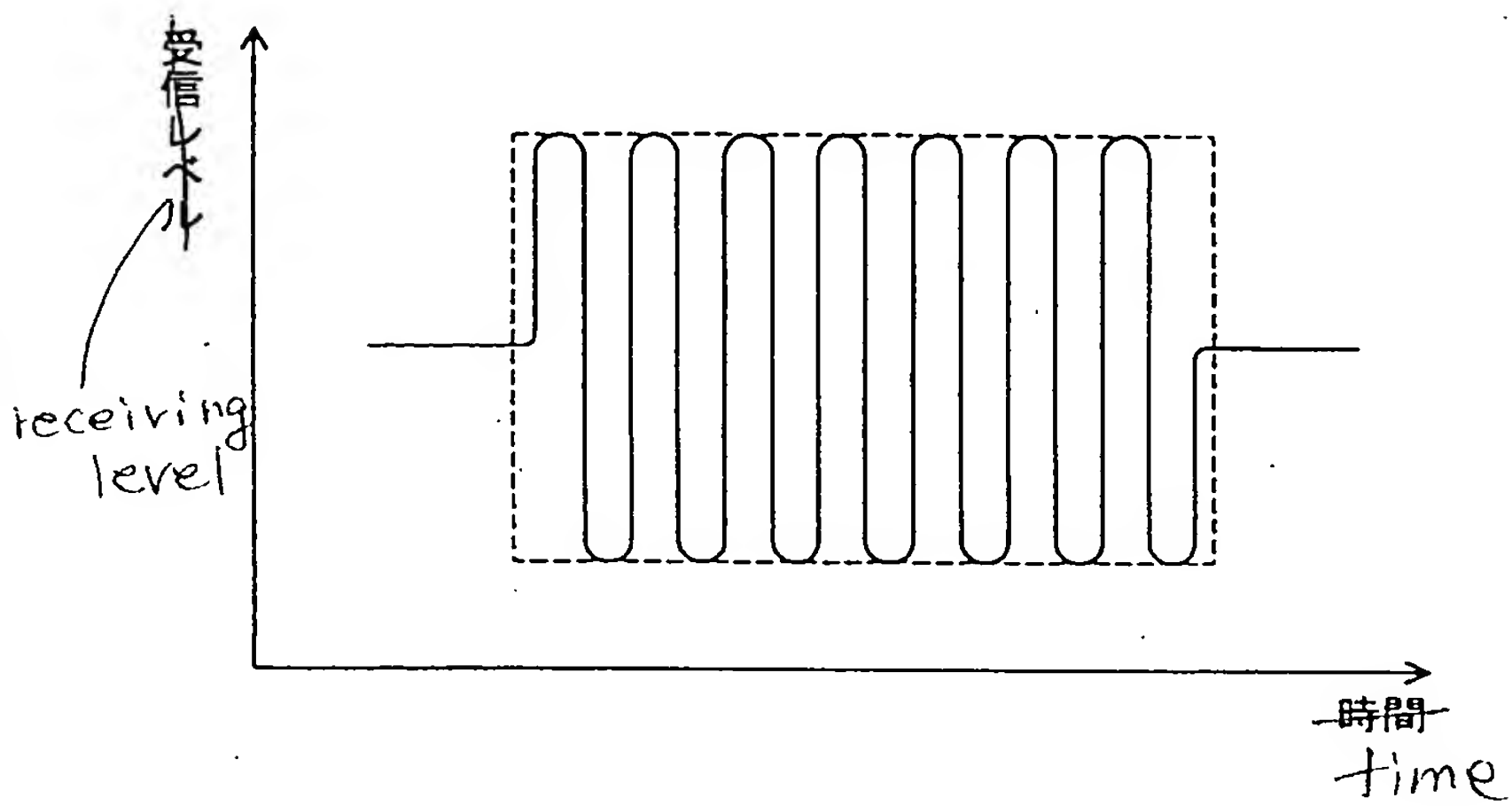
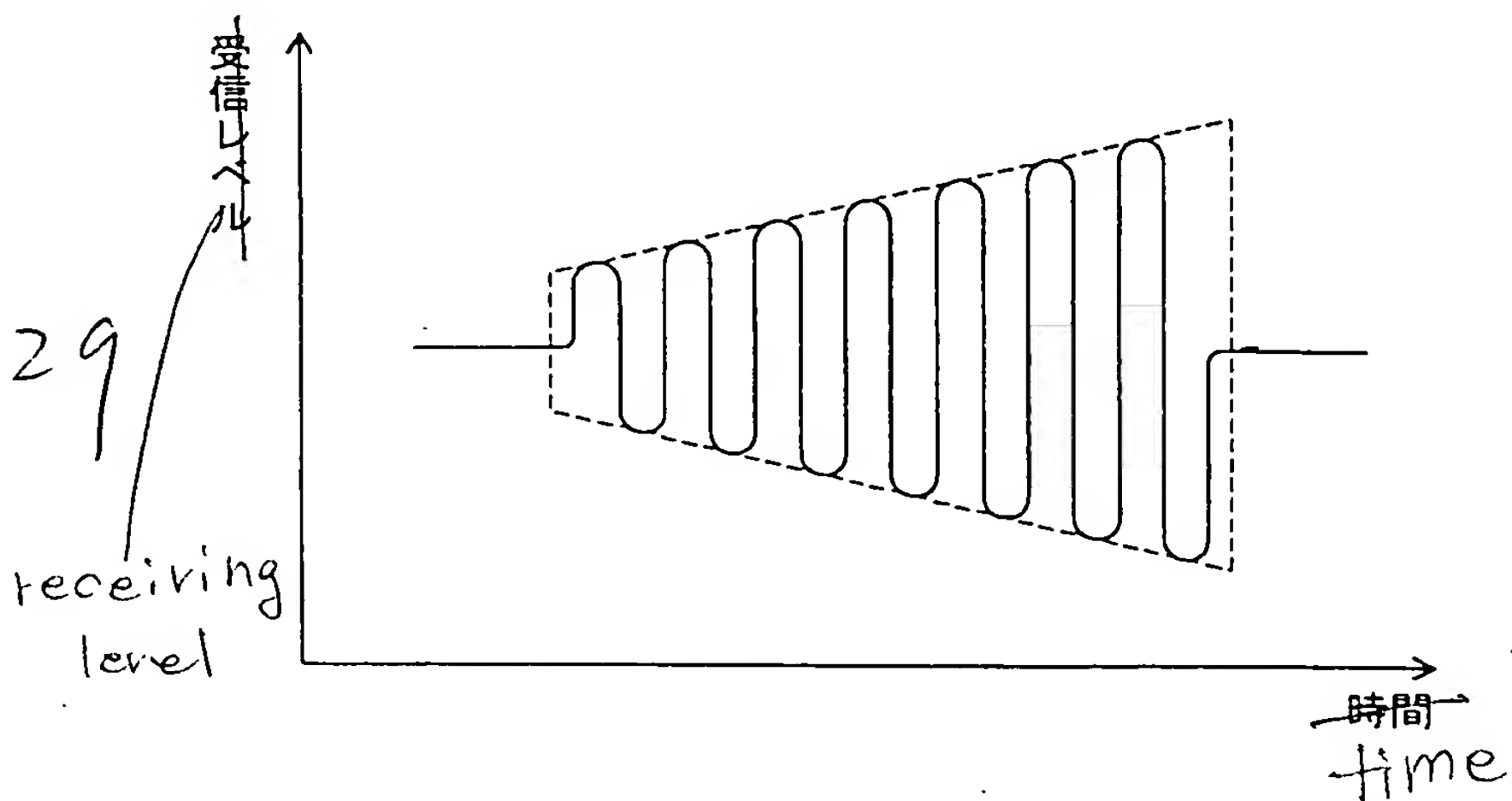
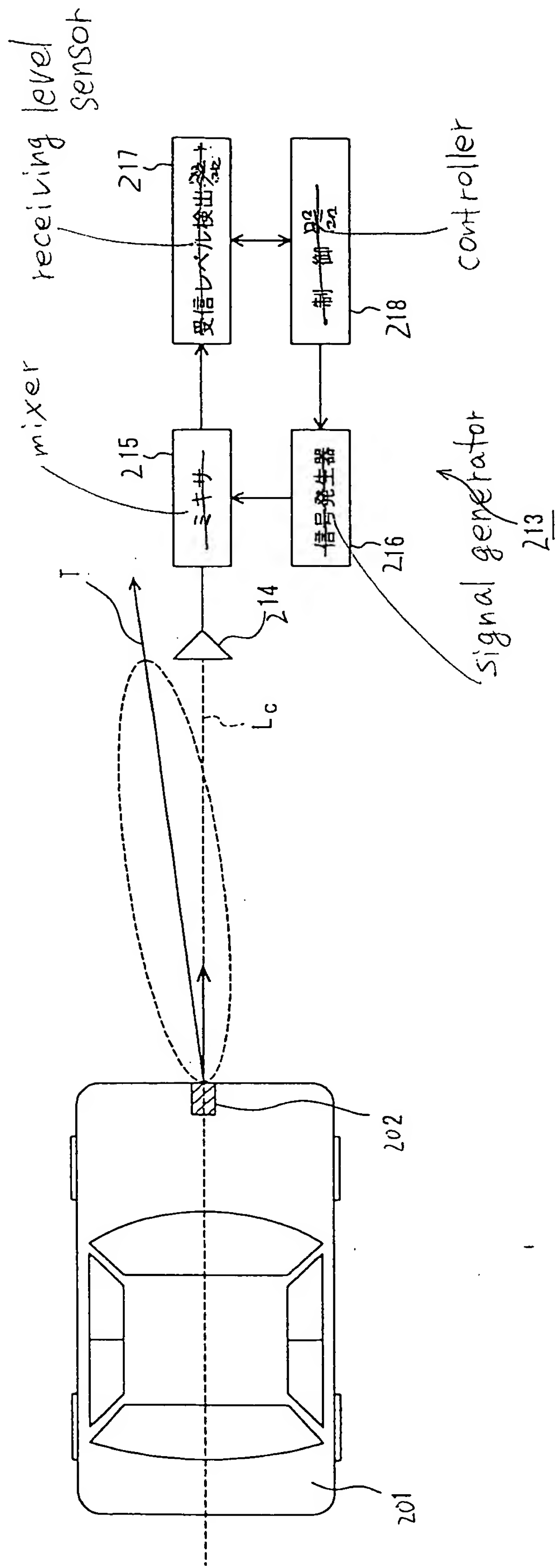


Fig. 29



[illegible]

horizontal surface.

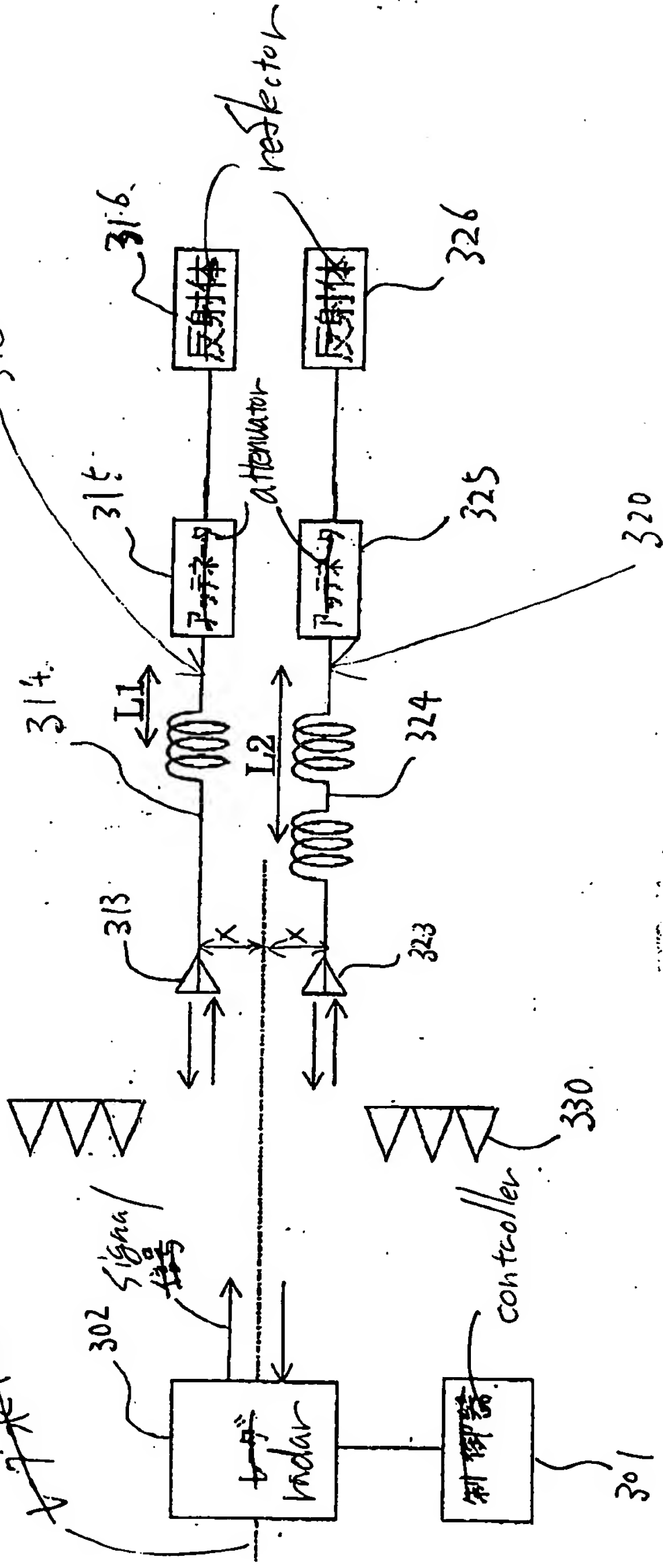


Fig. 32

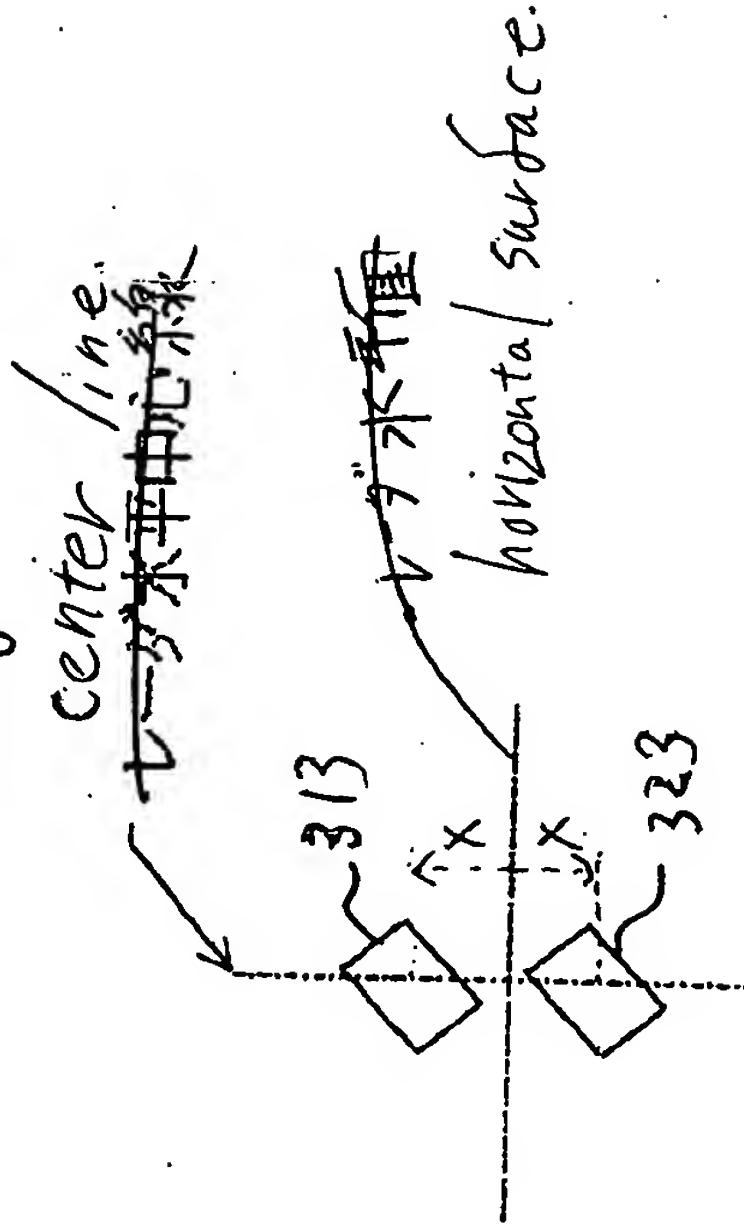


Fig. 33

